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ORIGINAL ARTICLES.

DENUDATION, OR EROSION, OF THE TEETH.

BY JOHN S. MARSHALL, M.D., CHICAGO, ILL.

[Read to the Section on Oral Surgery of Association, June, 1883.]

MR. PRESIDENT AND GENTLEMEN:

The subject to which I desire to call your attention is one that is still under controversy, and my object in presenting this paper is to review the opinions that have generally been entertained as to the cause of the disease, and emphasize, if I can, more fully than has yet been done the objections to these views, and then recall to your minds an explanation of the cause of the disease which has not heretofore received the attention it has deserved, viz., electro-chemical action.

The terms denudation and erosion are derived from the Latin, the *first* meaning "to lay bare," or "the condition of a part deprived of its natural covering, as a part denuded of its cuticle or mucous membrane, a bone of its periosteum, or a tooth of its enamel." The latter term means "to eat away," or "to be gradually destroyed by the action of some corrosive agent. It is often used in the same sense as ulceration." (Duglinson.)

Various terms have been applied to this disease, such as denudation, erosion, abrasion, surface wear, and atrophy.

Denudation or erosion of the teeth is a disease which attacks these organs, beginning with the enamel and gradually involving the subjacent dentine, without any of the appearances or characteristics of dental caries. It consists of a gradual wasting away of the enamel and dentine, generally upon the labial and buccal surfaces, most often beginning with the incisors, though it may attack other teeth first, and may involve all of the teeth to the second molars. It usually begins at the gum, forming cavities or grooves, which follow the curves of the gum lines. They are as evenly and smoothly cut as though made with a file or disk, are highly polished, perfectly hard, and many times absolutely free from discoloration.

The surface of the groove is generally quite sensitive, sometimes exquisitely so, causing the patient much uneasiness and pain. Occasionally the process begins at numerous irregular points on the labial surface, which extend, and after a time coalesce, involving the loss of the entire enamel wall of this surface. The disease progresses, in rare cases, as far as the pulp, laying that organ bare, while in the majority nature provides against it by filling up the pulp chamber with secondary dentine and thus protecting it from exposure.

In other cases, after progressing to a more or less extent, it seems to become self-arresting.

The rapidity with which the disease progresses is also variable. In some cases the loss of substance will be so slow as to require ten, fifteen or twenty years to reach the pulp chamber, in others only a little more than as many months. The superior teeth are much more liable to be attacked than the inferior, though cases are quite common in which both are affected, but I have never seen the lower teeth destroyed to the same extent as the upper.

John Hunter was the first to notice this disease, and he described it about a century ago. He named the disease "Decay by Denudation," and thought the disease was inherent in the tooth itself, and stated that he had seen cases where it appeared as if the outer layer of dentine had been destroyed first, and that the enamel afterwards broke through for want of support.

This theory is evidently erroneous, for no such phenomenon occurs in this disease. He has doubtless confounded it with that form of caries in which the enamel becomes partially decalcified in spots, and permits the pathological condition to extend to the subjacent dentine, when after a time they break away together, leaving a shallow cavity more or less irregular in form, but lacking that smooth, polished condition which always attend a case of true denudation or erosion.

Bell dissented from the views of Hunter, but expressed himself at a loss to explain the cause of the disease. He suggested, however, that the cause might be one of faulty development of certain concentric portions of enamel, which would render such portions more liable to mechanical abrasion, or other injury, than the rest.

If such were the true explanation, we should expect to see the grooves extending completely around the necks of the teeth, but this condition never occurs; and yet certain portions of enamel may, as he states, be faulty in their development, but not necessarily, however, extending completely around the tooth; and thus predispose such teeth to the action of solvent agents, as is believed to be the case in dental caries.

Fox, in writing upon the subject, frankly admits that he is unable to assign a cause for the disease, but thinks it is dependent upon some solvent property of the saliva. If the saliva contains the solvent which is responsible for this disease we would expect to find

all the surfaces of the teeth equally affected, for they are always more or less in contact with it. The inferior teeth are completely bathed in the saliva, so that if the suggestions were correct, the lower teeth would be most often affected, while clinical experience teaches the very opposite of this.

Wedl describes the disease and classes it among the atrophies, but makes no attempt to account for its peculiar manifestations. He calls attention to the fact, however, that sometimes the mucous membrane of the cheeks and lips is raised into a fold opposite the dental arches, and suggests that it may be well to consider in future cases whether any relation exists between the defects upon the necks of the teeth and these folds or ridges.

These folds or ridges I have noticed many times, but they are by no means a constant accompaniment of the disease, and when such instances have occurred, I have been inclined to consider it a result, rather than a cause of the disease.

Salter calls the affection "surface wear," and ascribes it to friction of the lips, cheeks and tooth-brush.

The surfaces of the teeth attacked are those usually reached by the tooth-brush, and by many the disease is thought to be one of mechanical origin entirely; but this cannot be the case, for often the grooves or cavities will reach around the teeth mesially and distally to points impossible to be reached by the tooth-brush, or by folds of the mucous membrane of lips or cheeks.

The break in the tissue is also, in some cases, so decidedly undercut as to prove conclusively that such a condition could not have been caused by the friction of the tooth-brush. Tomes also observed a case of the disease where the patient rarely or never used the tooth-brush, and Mr. Harrison reported a similar case at the meeting of the Otological Society of Great Britain, in May, 1870. But the most conclusive argument against the mechanical origin of the disease was furnished by Dr. Muric, in a paper read before the same society at its meeting held in June, 1870, in which he related the fact of having found a sea lion (the Otaria Jubata) whose teeth showed the results of this disease to a very considerable extent. The positions most notably affected were the sides of the teeth, where friction would be reduced to the minimum.

The tusks, or great cuspids, were most conspicuously affected by the disease. Tomes thinks this condition, "at least in so marked a degree, is not common among seals, but has seen an approach to it in the teeth of several specimens of different species," and he further says, that in the museum of the Royal College of Surgeons may be seen a skeleton of a seal in which this condition of the teeth is well exemplified, some of the teeth being deeply grooved in positions not exposed to friction.

Magitot regards the disease as a result of caries which has been spontaneously cured or arrested by the obliteration of the dentinal tubuli.

I cannot understand how this author, for whom I have the greatest respect, can arrive at such a conclusion from the phenomena presented by the disease. If, as he suggests, it is caries in the incipient stage, arrested or cured by the obliteration of the tubuli from a deposition of calcareous matter, why is it that in almost every case, the teeth thus affected are sensitive, some exquisitely so, to the touch of an instrument, changes of temperature, acid condiments and confections? Calcified nerve tissue has no sensation (assuming that nerve fibrils penetrate the tubuli of the dentine); hence his theory in this respect must be erroneous. These cases are also usually progressive, many times extending over a series of years, and perceptible changes can be noted from time to time.

To illustrate, the model I show you is the cast of the mouth of a gentleman living in Chicago. The case I consider a very remarkable one. You will notice the six anterior teeth and the right first bicuspid of the upper jaw are quite extensively denuded, the enamel being entirely removed from all of the teeth named, upon their anterior surfaces, with a considerable portion of the dentine, leaving an inclined plane pointing backward, and extending from the margin of the gums to the ends of the teeth, shortening the anterior teeth to the extent of about a sixteenth of an inch.

The denuded surfaces, you will notice, are not all grooved in one direction, the central incisors and the left lateral are grooved horizontally like all the others, but are also grooved longitudinally at the cutting edges. The first and second bicuspids of the lower jaw on the right side are also affected, but not to the same extent as those of the upper jaw. Fifteen years ago Dr. Allport. of Chicago, filled with gold the six anterior teeth upon their cutting edges, for the front teeth originally occluded squarely, and by mechanical abrasion, cup-shaped cavities had been worn into the dentine, making it necessary to fill them. The centrals were also slightly decayed at the margin of the gums, and small fillings were also inserted there.

Nine years ago it was first observed that the disease had attacked the teeth; two years later it had progressed so far as to make the edges of the fillings stand out above the surrounding tissue on the labial surfaces. These edges were rounded off, and the case dismissed for the time being. Shortly afterwards the gentleman went to Europe, and remained there four years. On his return not a vestige of the fillings was left, or even a depression to indicate where they had been, the surface being as smooth and regular as though cut and polished with file or disk.

There has also been a perceptible loss of structure during the last three years, but the destruction has been much less rapid than previously.

Numerous other cases might be mentioned to substantiate this position, as well as the fact that it does not originate in incipient caries. Cases have occurred in their incipiency, and progressed stage by stage under our eyes, and at no time have they shown any signs of decay.

In the case just mentioned two of the teeth were slightly decayed at the gum line, but none of the others were at any time affected in this way.

The late Dr Eleazer Parmley, of New York, re-

ported some years ago a case in which erosion had attacked natural teeth that had been set upon an artificial piece in precisely the same manner as the teeth having natural attachments to the alveolus.

Tomes and Harris are both inclined to think the disease is one of chemical origin. Tomes suggests that it is caused by the fluid secreted by the mucous membrane, covering the parts affected, undergoing fermentation or affording a nidus for fermentation, and thus may provide an acid solvent.

Harris adopts the opinion that the loss of substance which characterizes the affection is produced by the action of acidulated buccal mucus. In every other part of the mouth this fluid is mixed with saliva, and the acid it contains so diluted as to prevent it from acting on other portions of the teeth.

The view held by these authors is the one most generally accepted, I think, perhaps, because no better theory has been advanced. This theory, however, does not account for all the peculiarities of the disease. To illustrate; certain teeth are affected in individual cases to the exclusion of others. I have seen several cases where the disease attacked the superior incisors and bicuspids while the canines were entirely free, and *vice versa*, and one marked case of the disease in the lower bicuspid on both sides, while all the other teeth of the mouth escaped entirely.

I have frequently tested these cases with litmus paper to ascertain the condition of the mucous secretions of the lips and cheeks, but have never found any very marked acid reaction; in fact, have often found greater reaction in mouths where the teeth were entirely free from the disease. In looking for the views entertained upon the causes of this disease I found also an article translated from the German by C. E. Koch, and published in the *Missouri Dental Journal*, August number, 1872, in which the author—who failed to sign his name—advances the theory that the disease is one having a close analogy to the process of resorption, attacking the roots of the deciduous teeth prior to their being replaced by the permanent organs. He claims that "the gum may secrete a fluid endowed with functions similar to those possessed by the absorbent organ found at the roots of the deciduous teeth, and by this means the tissues are removed, leaving the surfaces as in the case of the roots of the teeth just mentioned, smooth and polished;" but qualifies his statement by saying that he "feels inclined to assume at least a predisposition of the tooth concerned, for the reason that in all cases only certain teeth are attacked by it." He bases his argument, however, upon what he assumes to be a fact, viz.: "that denudation always appears upon the neck of the tooth." He has evidently overlooked the fact that cases of the disease occur, as we have already stated, upon the labial and buccal surfaces, remote from the margin of the gums, at points not likely to be reached by the eroding fluid in sufficient strength to account for the rapid progress of the disease in some of these cases.

Garretson thinks the true explanation of the cause of this disease has been but recently enunciated in the experiments of Mr. Kincely Bridgman, the author of the electro-chemical theory of decay.

Garretson says his present convictions have led him to believe that in this direction will be found to lie not only the cause of the disease, but the prophylaxis. He further says: "It would seem, however, that back of the immediately acting cause must be a predisposition; here it would seem to be the result of impressions made on the enamel at the period of its formation, and which deficiency the nutritive functions have failed to correct. It might, indeed, very well be that such enamel is entirely deficient in vital resistance, and thus subject to be acted upon as any inorganic structure, being by electrolytic action simply dissolved."

I have called your attention to the opinions of all the most eminent dental pathologists who have written upon this subject, from John Hunter down to the present time, and have stated what seemed to me to be the objections to their views, but I fear we are not much nearer a solution of the problem than when we began. I am, however, very deeply impressed with the idea (as expressed by Prof. Garretson,) that in the electro-chemical theory of decay of Mr. Bridgman seems to lie the solution of the problem.

The case recorded by Dr. Eleazer Parmly had always been a mystery to me until I studied Mr. Bridgman's experiments, and since that time I have felt that here was possibly the explanation; that it was of electro-galvanic origin; the plate and the teeth forming the elements of a battery, and the buccal mucus, which is of slightly acid reaction, in contact with the labial and buccal surfaces forming the acid medium by which the current was established and maintained. Now, may we not carry this thought a little farther, and apply the theory of Bridgman to this disease?

The tooth, invested at the root by vital tissues, is rendered electro-positive, thus forming the positive element of a battery; the air surrounding the crown or exposed portion renders that electro negative to the root, and forms the negative element; or, in other words, the tooth is polarized. The only thing now needed to establish an active current is an acid fluid, and that we have almost constantly in contact with the labial, buccal and approximal surfaces of the teeth, at just the points where the disease manifests itself.

A piece of metal, when polarized, is positive at one end and negative at the other, neutrality being reached at the center. In the case of the copper wire in Bridgman's experiments, only that portion of the wire exposed to the atmosphere was rendered negative, no matter how much or little was exposed, and the neutral point was reached at that portion protected from the action of the atmosphere. The greatest loss of substance of the copper wire was at the surface of the fluid (dilute sulphuric acid) or where the fluid and the atmosphere came in contact, and beneath the fluid there was no action at all. We argue, therefore, that, like the copper wire, the tooth will be acted upon most vigorously at the junction of its two poles, provided there is an acid medium like the buccal mucus to establish and maintain the electro-chemical action. By this action the lime salts are removed at the line of junction between the atmosphere and the buccal mucus, and washed away.

This theory also explains one of the very common and at the same time peculiar phenomena of the disease, viz: the under cut condition of the grooves at the border nearest the gum. It is a law of electricity that the main current always flows from the positive to the negative pole, and that the positive element is most readily acted upon and soonest destroyed. The same laws govern like conditions in the mouth. The root of the teeth being positive, and the crown exposed to the atmosphere (and not protected by fluid) negative, the greatest waste would be towards the root or positive pole, and as soon as the gum line was nearly reached the external surface would be protected by the fluid always present at this point, and the loss of substance cease, while the other portions toward the root would be acted upon with the original intensity, and thus in time would occur the under cut condition.

There is one other factor, however, entering into this problem, which must not be overlooked, viz: vital resistence, and it doubtless must exert a powerful modifying influence over electro-chemical action; for observation has taught us all that teeth of the best organization have stronger vital resistance than teeth poorly developed. This is illustrated by the marked difference with which these teeth yield to the ravages of dental decay.

I have also noticed that the teeth most often attacked by denudation, or erosion, are those that are generally classed as medium or soft teeth, low in vital resistance, the patient often inheriting a peculiar cachexia, the scrofulous or syphilitic, which has had a depressing influence upon the developmental process, thus lowering the power of vital resistance, and predisposing the teeth, as well as other organs of the body, to the ravages of disease.

This seems, to my mind, to be the most rational explanation of the cause of this affection that has yet been promulgated, and if I have been able to throw ever so little added light upon this question, I shall have succeeded in my undertaking.

DISCUSSION.

Dr. G. H. Goodwillie. Had Dr. Marshall any opportunity to inquire into the previous history of the case described?

Dr. Marshall. In the case of which the cast was shown there was probably inherited syphilis. The pulps of all the teeth were alive. Treatment consisted in cutting off a small portion of the surface towards the palatine wall of each of the incisors, without exposing the pulp, and fitting a ring to which a cover of platinum, very thin, was attached, forming a cap; to this cap a porcelain crown was soldered, and the whole cemented to the stump of the tooth with oxyphosphate. The cuspids being only slightly affected, were not interfered with, but the probabilities are that in time they will have to undergo the same treatment.

Dr. Goodwillie. There is no doubt that the structure of the teeth is often affected by certain diseases. By the marks which they leave on particular portions of the tissue, we can almost tell at what time the injury was wrought, and what it was that caused the disturbance. Syphilis, small-pox, whooping-cough, scarlet fever, and the pustular diseases have each their characteristic marks, by which we can tell at what portion of the eruptive period their influence was felt.

Dr. L. Buffett, Cleveland, had just a word to say. If the destruction of tissue in the disease under discussion is to be accounted for by the electro-chemical theory, it is to be borne in mind that it is only because this action places the tissues in condition to be acted upon by an acid, which, at bottom, does the real work of destruction.

Dr. Jacob L. Williams thought the theory advanced by Dr. Marshall quite plausible. He remembered in this connection a remark his preceptor, Dr. Keep, used to make regarding galvanic action in the mouth —he called it animal galvanic action—and that was with reference to the frequent similarity of the points of attack on opposite sides of the mouth. This statement of Dr. Marshall's puts it in a more scientific shape.

Dr. W. P. Horton, Cleveland. Dr. Marshall propounds a new theory to explain the cause of erosion, and makes out a very good case. In the present instance, he says there was underlying it all a syphilitic taint. Now, the question is, is there any limit set to the period within which the poison thus introduced may set up the acid action which causes the destruction, or may it not be antidoted by medication at the proper time?

Dr. Marshall. Did I understand the question to be, was there a specific deposit among the crystals of the forming tooth that would in time develop an acid?

Dr. Horton. The acid or its cause must be inherent in the system. Can it be eradicated?

Dr. Marshall. I did not say it was an acid. That is what I want to find out. I do not think the taint will develop an acid that will cause this disease. I do think that it lowers the power of vital resistance so that by and by, when the exciting causes come into play, the tooth tissue is more readily dissolved than it would have been had the vital resistance been normal in tone.

Dr. Goodwillie. The causes of this disease are either local or constitutional. Syphilis is *the* virus of viruses. If vitality is so impaired that nature has not the power to assert herself and throw off the influence, some day there will come an evidence of the impression. He has seen the primary, secondary, and tertiary stages developed within a year; and again the primary and secondary would develop within a year, and the tertiary would not show itself for twenty years afterward. He instanced the case of a child five years of age, the father of which had contracted syphilis eighteen or twenty years previous, and afterwards married. The first child of the union was alive, the second and third were dead, the mother was dead, and this child was the first fruit of a second union. He had to remove the whole of the upper jaw. If the child had had vitality enough to go on to maturity before the symptoms were developed, we might have had such marks on the teeth as those in the cast shown by Dr. Marshall—we cannot tell;

but it couldn't throw off the taint, hence came the operation described. We never know when the vice of syphilis has left the system. As to local exciting causes. it may be acidity, it may be galvanic action.

Dr. Horton. The question I asked was, was there not some definite point during the construction of the tooth when nature's processes were interfered with by some specific element. Dr. Goodwillie says there was a disturbing element, and we have the marks of the interference on the teeth themselves. Now, is there any period within which this interfering element performs its work of disintegration. My opinion is that the local disturbances arise during the period of formation of the teeth. My experience is that the development of the denudation may occur at any age —at from sixteen to twenty-one, or from thirty-five to forty,—the last is the most usual age.

Dr. Marshall thought Dr. Horton mixed the constitutional and local causes. In my paper I distinctly stated it was more apt to occur in the mouths of patients who have suffered from the inherited form of syphilis; have seen it in patients as young as sixteen years of age, but in most cases they are above thirty.

Dr. Horton. Would denudation be apt to occur if the patient were inoculated with syphilis after he had arrived at manhood?

Dr. Marshall. I do not claim that syphilis is the exciting cause of the condition under discussion. It is simply a predisposing cause.

A CASE OF AMAUROSIS DEPENDENT UPON DENTAL IRRITATION.

REPORTED BY W. W. ALLPORT, M.D., D.D.S., CHICAGO, ILL.

[Read to Section on Oral Surgery, June, 1883.]

Mrs. L., aged 34 years, of nervo-bilious temperament, and fairly good health, called, in May, 1879, for an examination of her mouth. Found the left first superior biscupid tooth decayed upon the distal surface, but not so extensively as to expose the pulp, or sufficiently near to it to require, in my judgment, special protection. The cavity was filled with gold and the case discharged. In April, 1881, one Sabbath, I was called in great haste to see the patient at her home. The tooth which I had filled had become suddenly very sore, with great pain in the left eye. The patient then explained to me as the reason she had not visited me for a regular examination, as had been her custom every three or four months, a serious difficulty with the left eye, involving partial loss of sight, profuse lachrymal discharge, and severe paroxysmal pain.

Upon examination I resolved to remove the filling, and did so at once. The history is as follows:

For several weeks after the tooth was plugged there was a slight uneasiness in it, with sensitiveness upon sudden changes of temperature, such as were produced by taking hot or cold drinks into the mouth; but nothing so marked as to require, in her judgment, any attention, and these symptoms finally passed away. In about six months after the operation upon the tooth she began to experience pain in the left eye, of intermittent character, increased flow of tears and some slight obstruction of sight. Being in New York soon after the appearance of the trouble, she consulted one of the most eminent ophthalmologists of that city, who, after a careful examination, said he "could discover no local cause to account for the difficulty, and therefore it must be of constitutional origin, though obscure." He prescribed constitutional treatment, as he said "to build up the system."

After faithfully carrying out his instructions for some weeks and getting no relief, she called upon him again for another examination, the result being the same as the previous one, and the constitutional treatment continued.

On returning to Chicago she consulted one of the leading ophthalmologists, who also said he could find no local cause, and that it must be of systemic origin.

The symptoms for months had grown gradually more aggravated, so that she had been obliged to give up reading and writing, as all such efforts would aggravate the symptoms.

In this condition she again visited New York, for the purpose of consulting her oculist, feeling sure that as her general health was good, there must be some local trouble with the eye that had been overlooked. After a third careful and most painstaking examination, he said he could find no sufficient local cause for the symptoms complained of, and that he could do nothing for her, except what might be hoped for through constitutional treatment.

The history of the case was so remarkable, that I was led to make a most thorough examination of her teeth on her first visit to my office after the removal of the filling, and on percussing the tooth that has been referred to, found it slightly tender; and as this was the only tooth manifesting the slightest abnormal condition, I resolved to ascertain the condition of the pulp. On excavating the cavity, I found the bulbous portion of the pulp chamber filled with secondary dentine quite up to a line corresponding to the edge of the alveolus. Above this I found a living pulp in a state of low inflammation. As the instrument pierced the pulp the sensation was communicated to the eye, causing a paroxysm of pain. The patient then stated that since the removal of the filling the pain in the eye had been much less, and the soreness of the tooth was considerably relieved.

After removing the pulp, which I did at once, and treating the tooth for a few days, the pulp canal was filled with oxychloride of zinc cement, and the crown cavity with oxy-phosphate. The case began to improve at once, and in a few weeks the sight was restored to its normal condition, and all the other symptoms had passed away.

Dr. Williams. We often see deposits of secondary dentine where the action seems to be natural. At other times we find it accompanied by an inflammatory action. This case is unique, in going on to fill up the tooth with a secondary deposit to so great an extent without the trouble being discovered or suspected.

Dr. Buffet. In this case there was very little irritation of the tooth—not sufficient to cause special

pain. This you will find true—that in all cases of reflex trouble with the branches of the trifacial, the local trouble will be a low chronic inflammation; even if it is at one time acute, this will pass and it will become chronic. We must look closely for very slight manifestations; it is an error to look only for the greater lesions. Dental nodules are among the most difficult troubles to diagnose. In different individuals we have dental irritation in full manifestation, and the opposite, depending largely upon temperament. Those of full habit need depressants, and those of low habit require tonics.

Dr. Butler. The case is of great interest not only to specialists, but also to the general practitioner; low or slight manifestations is one of the best evidences that it is the result of a chronic rather than an active irritation. Where it goes on slowly we get amaurosis through reflex action. In a case of amaurosis under the care of an oculist in the city, the patient had two superior incisors with decay extending very near the pulp. The irritation kept up and the sight got no better. He (Dr. Butler) made a carefnl examination of the mouth, and came to the conclusion that the trouble with the eyes was aggravated by the condition of the incisors. He removed the morbid tissue and treated the teeth, and in a short time the eyes improved under the treatment of an oculist, who admitted that placing the teeth in proper condition had been of great assistance.

Dr. Brophy thought that an attempt to save pulps which were partially sloughed off or in a state of chronic inflammation was a mistake, and there was often risk of leading to such complications as had been described.

Dr. Marshall. One fact which such cases empha size is that the general practitioner should not ignore a thorough examination of the teeth in arriving at the cause of these reflex troubles. Often the teeth are not looked at by them. Cases may be named of neuralgia arising from irritation of a pulp treated for malaria, the trouble being discovered only on a visit to a dentist. That was one reason why he was in favor of teaching dental surgery in the medical schools—that the general practitioner might have a better idea of dental diseases and their ramifications than he has to-day.

MAJOR AMPUTATIONS AND HOT WATER DRESSINGS.

BY H. H. CLARK, M.D., DANVILLE, ILL.

[Read to the Tri-State Medical Society.]

MR. PRESIDENT AND GENTLEMEN:—Amputation of the thigh or of the arm at the shoulder rank as the most fatal of surgical procedures. The causes of this fatality we shall not stop to consider in full, but simply enumerate such as are specially presented in the cases we bring to your notice to-day, and to which our treatment was specially directed, namely, shock, hæmorrhage and gangrene. I enumerate them in the order of their frequency as occurring in these cases. Shock, more or less severe, is always present. Hæmorrhage, in some form, is not infrequent, and gangrene occasionally presents in civil practice. To prevent these, or they having occurred to abridge their severity, is ever a foremost consideration of the surgeon.

The latter fact has induced me to pursue in all cases of surgery, of whatever magnitude, the treatment to which I would to-day call your attention—hot water applications. And that I may the better illustrate its value, I have selected only my gravest cases, which I will now lay before you.

G. W. K., male, æt. 30.—Gunshot fracture through upper third. Missile conoidal, cal. 44, entered at lower angle of Scarpa's triangle, passed directly through, implicating nerve and artery and badly comminuting femur. Amputation half an hour after receipt of injury. Operation by lateral flaps; bone cut just below trochanter. Hæmorrhage had been very great and the shock was profound, and three hours after amputation he presented the appearance of a man dying of cholera. During the three hours a constant oozing of blood had been going on, until the dressings were completely saturated. Close bandaging had no effect. Cutting the sutures, I opened up the flaps and applied sponges saturated with hot water, which was kept up for one hour. The wound was then closed, hot water dressings applied until complete reaction, which occurred sixteen hours after the operation. Primary union took place, and he was discharged with a perfectly healed stump, on the 12th day of November.

Robt. Reich, March 22, 1865, was caught by driving belt and thrown against a four-foot circular saw making 400 to 500 revolutions per minute. The saw entered at the lower border of left trochanter major, passed obliquely across to origin of tendon of internal vastus muscle, leaving a part of the latter muscle and a little integument intact. The femur was badly comminuted, and the muscles and integuments torn into shreds. After the first great gush of hæmorrhage there was but little loss of blood. The shock was very severe. When I first saw him, at 1 o'clock A. M., March 23rd, he was almost pulseless, and complaining of agonizing pain in the injured limb. Stimulants and morphia had been given per orem, but seemed not to affect him. After injecting three-fourths grain of morphia hypodermically, and giving freely of ammonia and spirits frumenti for one hour without any perceptible change, and believing the pain was the cause of the continuance of the shock, and that the only relief to be had was to remove the large mass of lacerated nerve tissue exposed to the air, I decided to amputate. A hurried consultation with Drs. Schaffer, Eagleson and Williams negatived disarticulation at the hip as certainly fatal, and as the muscles and skin were entirely cut away on the outside of the limb as high as the trochanter, I resorted to the following as the only hope of closing the wound:

Passing the knife in on the outer side of the femoral artery, on a line transverse with the lower border of the trochanter major, I cut squarely out over to the trochanter, carrying the incision down to the bone, and around the limb, until I came to the point where the knife would have emerged had it been carried through from the starting point. I carried the

knife through on inside of femur, emerging at posterior point of first incision, and formed a flap from the tissues on inside of the thigh. The saw was applied obliquely across from the middle of the lesser to great trochanter, and just enough bone removed to form a smooth surface. The lower sharp angle was then slightly rounded off. The difficulty now was to close the wound, with but one flap, and it no greater than is ordinarily formed when we have ample tissues to work with. I overcame the difficulty by cutting out a good part of the muscles, and so letting the remainder fold more squarely down across the stump.

While ligating the arteries, an anomaly of size was noted, the femoral being about as large as a No. 7 or 8 sound, American scale, whilst the gluteal was fully the size of a No. 16 or 17. The ligature upon the latter did not come away until the thirty-fourth day. Primary union on anterior angle; a small slough at posterior, followed by much suppuration; healed in about five months. Five hours after the operation he had completely rallied from the shock and partook of a very fair amount of food, thus corroborating my conclusion as to the pain being the cause of the severe and prolonged shock. I show you a photograph of the results in this case. I only made the amputation, Dr. Schaffer, of West Salem, Ill., had the subsequent care of it.

November 13, 1876, Wm. Paten, æt. 19; scrofulous habit. Four years ago was kicked by a horse upon the right tibia. Abscess of bone followed, involving the head of the tibia, opening into the joint and eventually destroying the articulatory cartilages. Patient very feeble. After a short tonic course amputated above the condyles on November 13. His recovery was very rapid and satisfactory, he being able to go to the table for meals, three week in primary union throughout.

H. L., æt. 26; December 27, 1880; right arm crushed under locomotive engine about three inches below shoulder. Saw him at 2 A. M., arm almost separated from the body. Hæmorrhage very great, but had ceased when I reached him. Shock severe. Stimulants and morphia; operation at 7 A. M. Having fallen upon his back, the flange of the wheel had impinged upon the front and axillary surfaces, tearing away all the soft structure as high as the anatomical neck, while the posterior soft structures of the arm and shoulder were almost pulpified by the pressure to which they were subjected. Forming a flap from the bruised posterior structures and trimming the anterior as closely as possible, I disarticulated and closed the wound; at 3 P. M. he had fully reacted and was resting comfortably. On the night of the 31st was restless, had severe pain in wound. New Year's morning there was a gush of blood, and cold pressure was applied; opium given freely; could not bear the cold, so it was removed. At 9 P. M. the patient promised well, his only complaint being about the amount of pressure. Slept from 10 P. M. to 1:30 A. M., when he awoke suddenly and cried out "I am bleeding!" In five minutes I was by his side, to find him almost pulseless. I instantly applied my fingers to the subclavian, ordered stimulants, and sent for assistance, which arrived in about twenty minutes, Drs. Kimbrough and Taylor responding very promptly. Notwithstanding the contused condition of the tissues union had proceeded very rapidly. Believing that these tissues would slough were I to ligate the subclavian where it emerges between the scaleni muscles, I opened the wound, cleared out the clots and began my search. The ligature upon the axillary artery remained firm. Examining carefully, I found the tissues in the posterior part of the axillary space very soft and sloughy, and easily broken down and removed by the finger. Having cleared every thing out I directed Dr. Kimbrough to remove his pressure from the artery, when a clear jet followed from a point well back under the edge of the scapula, which being secured proved to be the subscapular; a ligature was applied close to its origin and pressure removed. After carefully cleansing, the wound was closed. Union mostly by granulation. He was discharged with wound entirely healed in ten weeks from receipt of injury.

December 17, 1882, C. K., male, aged 13, had right ankle crushed by loaded coal-car, at 10:30 A. M. Hæmorrhage continued until syncope occurred; reaction followed by amputation just below tubercle of tibia at 2:30 P. M. Reaction from shock of operation was imperfect, and on the morning of the 30th gangrene was fully developed and had reached above the patella. By use of treatment to be given farther on, a line of demarcation was established, and amputation by oval flaps was made at middle of the thigh on the 9th of January. There was considerable suppuration, but in two months he was about on crutches. A fistula still exists at intra-angle down to the bone, which is slightly roughened. He is very strong at this date.

December 27, 1882, Ross Gallion, a farmer, while assisting to capture a tramp, was accidentally shot through the left thigh, the weapon being a smooth-bore rifle loaded with bird-shot known as No. . As will be seen by the pathological specimen shown you, the shot entered on the front of the limb, at junction of lower and middle third, passing slightly outward, backward and downward through the limb, shattering the femur, and severely lacerating the soft structures. Thirty shot went through, and were found

in the clothing on their removal by the surgeons who were called at the time; as many more were removed from the wound, and nearly as many more remained embodied and entangled in the tissue, and were found while removing the section of femur presented here to-day. From the history given me by Dr. Jones, of Covington, Ind., reaction was prompt, quickly followed by severe inflammation. In view of this latter fact, and that if performed the amputation would have to be high up, a conservative course was decided upon. The limb was put up with weight extension and local short splint. After a thorough trial the patient became intolerant, and they were removed, and the limb from this time to the date of removal was supported on pillows. July 3, six months from date of injury, the following conditions existed: Aside from emaciation and weakness, the patient's condition was favorable—*i. e.*, stomach and bowels and kidneys acting normally. The local conditions were, a very much swollen limb filled with abscesses and sinuses, with a profuse discharge of pus, that was steadily sapping the strength. The tissue had that peculiar cork-like feel of long continued subacute inflammation, indicating grave defects in nutrition of the parts and consequent lowered local vitality.

This local condition involved all the parts of the thigh as high as the trochanter. Every few days a small bit of bone would be discharged from some one of the numerous sinuses, always being preceded by an attack of fever and increase of the pain, the latter being continuously present in some degree. Taking into consideration the great exhaustion, the constant discharge of pus, the frequent appearance of bony structure in the discharge from the wound, the constant and peculiar pain, the three latter facts, coupled with the known opening of the medullary canal, giving undoubted evidence of the presence of periosteo and osteomyelitis and the large amount of structure involved.

The two last being extensive, as evidenced by the condition of the soft tissue close to the coxo-femoral articulation, and the direction upwards of two of the sinuses, a more unfavorable case for operative procedure could scarcely be conceived, especially so as amputation seemed the only one available, and as the only possible chance for recovery. Being a farmer, it was especially desirable that sufficient stump be left for the attachment of artificial support, and with this object in view, and lest it might prove impossible in consequence of the disorganized state of the bone to secure such, the following plan was mapped out and acted upon: To amputate just above junction of middle and upper third, flaps to be oval, and formed midway between a lateral and an anterior posterior flap operation, and saw through the femur. After having the arteries secure, had it been found that the periostitis and osteomyelitis had so damaged the bone as to render its retention unadvisable, an incision from the outer angle of the flap was to be carried up over the trochanter and the remaining section of the femur removed by disarticulation. This was found unnecessary, as the medulla seemed quite healthy, and the periosteum firmly adherent. Seven vessels were ligated, and torsion used upon nine more. A good deal of trouble was experienced in securing the profunda artery, in consequence of the softening of its coats and adhesion to surrounding structures. From examination of section of the femur shown, you will observe that it was not cut squarely across. This very non-surgical appearance was caused by the hard, brawny condition of the soft structures preventing the square application of the saw, no reasonable amount of force sufficing to draw them away from pressure against the back of the saw.

This unyielding condition also rendered the closure of the flaps quite difficult, but by use of very deep sutures and firm pressure with the hands it was satisfactorily accomplished. Drainage was effected by the ligatures being brought out at both angles. There was very little discharge after the fourth day. Union, primary, took place, and the 23d of July he was virtually discharged from supervision. Three weeks subsequently, during a fit of despondency over his helpless condition, he suicided by shooting himself through the head.

We now come to the treatment. Having secured against further loss of blood, I endeavor to relieve the shock by application of hot water to the arms, legs and abdomen, applied by flannel dipped in water at 125° to 140° F. Having obtained reaction and performed the amputation, I apply water as hot as can be borne by the hand, or about 150° to 160°, using sponges, alternately draining water into and by pressing the saturated sponges directly into the wound. After all bleeding has stopped so fully that the flaps can be handled without inducing any oozing, the flaps are stitched home. During the process of closing the hot water is kept draining into the wound freely, so as to keep it clear of all clots and render the contraction of all vessels as perfect as possible. Treated in this way, the tissues become so supple that the most perfect coaptation is effected, and as it were almost glued together. Small cavities or pockets can hardly occur, and the chances of clots forming and becoming a nidus for abscesses, or from decomposition causing septicæmia, is almost annulled.

After closing the wound the water is applied in gradually decreasing temperature until it is applied cold, and until this point is reached no other antigermiside is used, and then it is only applied by means of a piece of muslin, dipped in carbolized water, loosely wrapped around the stump. Adhesive straps or bandages are not applied until removal of the sutures, except in cases where, from unavoidable deficiency of flaps, the strain is too great upon the sutures. In conjunction with the hot water applications, morph. hypodermically, spts. frumenti, and ammonia are made use of until reaction is fairly set up; after which they are laid aside. In the case of amputation at the shoulder, upon breaking up the adhesion, the hæmorrhage from small vessels was very profuse, but was readily and permanently controlled in two or three minutes by pressure with sponge saturated with hot water. In the case of the boy, Kilpatrick, who suffered from gangrene and was exhausted to such a degree that a very moderate loss of blood would have proved fatal, Esmark's bandage

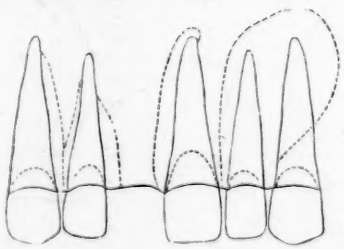
and tourniquet, with hot water flooded into the wound, secured the patient with a loss not to exceed two ounces. Along with hypodermic injection of nitrohydrochloric acid and a forty per cent. carbolized oil into the gangrenous tissues, as close to the living structure as possible, hot water was for three or four days kept constantly trickling over the parts, until a perfect line of demarkation was established. In this, the only case I ever used them, I inserted two drainage tubes, and in reviewing the course of this case I believe they proved a drawback, as the wound united everywhere else by primary union, except where the tubes were inserted. From these points suppuration continued for nearly three months, and at one point a small sinus still exists. As a preventive of septicæmia and pyæmia, I can only say I have never seen an indication of either in any operation where I have used hot water, nor have I ever had an abscess form in the stump, but in view of the results which I have obtained I believe, if properly applied, it will take a fair rank with other, at present, more popular agents.

A REMARKABLE CASE OF PYORRHŒA ALVEOLARIS, WITH REPRODUCTION OF BONE, OCCURRING IN THE PRACTICE OF DR. ALLPORT, CHICAGO, ILL.

REPORTED BY DR. JOHN S. MARSHALL, CHICAGO, ILL.

[In the Section on Oral Surgery, June, 1883.]

Mr. J. B. T., merchant, aged 46, of bilious temperament and fine physique, consulted Dr. A., on Feb. 10, 1883, with reference to a diseased condition of the teeth and gums and a profuse discharge of pus. Upon examination it was found that the right central incisor had been lost about five or six years previously. The teeth were very loose; those most affected were the remaining superior incisors and cuspids. The first bicuspid and first molar of the left side, the second molar of the right side, and the inferior incisors and cuspids and first molars were also affected. The diagram upon the blackboard illustrates the condition only of the anterior upper teeth, the dotted lines representing the loss of bone tissue (alveolar process) as ascertained by the use of a probe passed under the gum and following the roots of the teeth. (See cut.)



On the labial surfaces, the probe passed to the points indicated by the dotted lines around the teeth. In the case of the left lateral, the alveolus on the labial surface was completely gone, and nearly so in the case of the cuspid, only a small septum of osseous tissue remaining near its neck. The palatine wall of the alveoli of these teeth was still intact for the upper two-thirds, and nearly normal in the case of the others. A discharge of pus from around the necks of the teeth was first discovered about two years before, for which he had taken both local and constitutional treatment. When the patient presented himself the exudation of pus was very profuse, slight pressure causing it to flow out freely—at times as much as a half teaspoonful could be abstracted from the large pocket surrounding the roots of the left lateral and cuspid.

There was no history of syphilis, but there was a family tendency to scrofula, and at the time the patient presented himself he was under treatment, and had been for some months, for chronic inflammation of the kidneys.

Dr. Allport treated the case by first carefully scraping the whole of the denuded surfaces of the teeth and the edges of the alveoli with thin, narrow chisels made especially for the purpose. Aromatic sulphuric acid was then applied to the apex of each tooth by the aid of Farrar's syringe, the first application of full strength, afterwards one part of acid to three parts of water, the case being treated every day for a week. Later the acid was discontinued and glycophenique of full strength substituted, the patient reporting three times a week. Treatment was begun February 23, 1883, and on May 11, 1883, the case was discharged cured. The attachment of the teeth to their sockets was firm, and there seemed to be a new deposit of osseous tissue around the roots of the teeth. The gums have receded, though to no great extent, as will be seen by the dotted lines across the teeth in the diagram.

Dr. D. H. Goodwillie, of New York City, remarked on Dr. Allport's paper as follows:

"This case of Dr. Allport's, from the history he gives, is, without doubt, one of repair by new tissue, both osseous and fibrous. Wherever the periosteum was preserved a new osseous tissue was formed; and in the more internal parts, where there is no bone reproducing membrane, the new deposit was fibrous.

It is a well established fact that bone reproduction is produced principally by the periosteum and soft tissues, so that wherever this membrane is preserved in the removal of necrosed bone there will be reproduction when the conditions are favorable to it. Such conditions are, first, a careful preservation of the periosteum and soft tissues. Second, good free drainage, and a thorough and constant cleansing by irrigation. Even the normal secretions of the mouth, if they are left long enough, become abnormal and prevent the new bone forming process. Third, to have external support when necessary, in order to prevent motion and to secure the desired shape of the new bone. The general health of the patient to be put in the best possible condition.

Dr. Goodwillie. Was there any examination to determine the condition of the pulps? Were they dead or alive?

Dr. Marshall. No special attention was paid to this point, but the presumption is that the pulps were dead.

Dr. Talbot could hardly credit the possibility of

such a case were not the evidence so strong. We all know that the tendency of the alveolar process in these cases is to recede. He has seen no cases in his own practice where it was reproduced after having once been disintegrated; he has seen it contract and still keep the tooth in place, but he could not understand how it was possible that reproduction of the bony tissue could be brought about.

Dr. Marshall was glad that Dr. Goodwillie had brought up the subject of alveolar abscess simulating catarrh. A case of this character which had come under his own observation was that of a gentleman aged 30 years who had been under treatment for catarrh for a year and a half. Coming to have his teeth cared for, the central incisor on the right side was found to be devitalized and tender; it always gave trouble whenever a cold was taken. It was also noticeable that the catarrhal discharge was always from the right side. He opened into the tooth and found after cleansing it that water could be forced through it into the nostril. The tooth was treated, and with its cure the catarrhal trouble disappeared. Another young man—a student of dentistry—had an incisor which had been devitalized by his preceptor. It was neglected, and an abscess formed. He also had a discharge from the nose. On examination the condition of the incisor was discovered, and on its being treated the nasal discharge disappeared.

Dr. G. S. Shattuck, Detroit. In the case of pyorrhœa alveolaris reported by Dr. Marshall, was there any deposit of tartar?

Dr. Marshall. Yes. The scraping of which I spoke was performed several times, and was quite painful.

Dr. Truman W. Brophy, of Chicago, had seen this case while it was under treatment—the results achieved were certainly remarkable, and were to be attributed not only to the skill with which the case was treated, but to the vigorous condition of the patient. There is now not a vestige of suppuration; the gums are pink and the teeth firm in their sockets, which seem to be thoroughly restored. As a rule, teeth in the condition in which these were when the patient presented for treatment would be lost, it being only a question of time. The results reached here should give us encouragement to make the attempt at cure even where the case presents formidable obstacles. In connection with the treatment of alveolar abscess, Dr. Brophy commended the use of peroxide of hydrogen, much is claimed for it; it has the most marked antiseptic properties—even more so than carbolic acid. This is carried into the sac, and immediately following its introduction a foamy mass passes out. This is due to the oxydizing action of the drug on the decomposing fluid in the sac and to the destruction of the bacteria. The use of sulphuric acid has been criticised by some. The speaker has had good results in his own practice, and regards it as an excellent remedy. It destroys the necrosed bone, but acts only slightly on healthy tissue.

Dr. Shattuck had been treating a right central affected with pyorrhœa aveolaris. The anterior plate of the alveolar process was all gone, and a probe could be passed to the apex on the anterior surface. Treatment was dilute aromatic sulphuric acid once in twenty-four hours, washing clean with water twice a day.

Dr. E. C. Briggs, Boston, questioned the correctness of the statement that new bone had been produced in the case reported by Dr. Marshall. The only evidence of a reformation of bone is the feeling of hardness of the gum and the firmness of the teeth. This is hardly enough. There was no periosteum left to reproduce the bone, and that result seems impossible under the circumstances. He had had a case in which the alveolar process, from the superior central to the third molar, was affected, resulting in the loss of the whole of the outer plate of the alveolus and a portion of the inner. After removal of the necrosed bone, the soft parts were stimulated, resulting in the complete filling up of the space occasioned by the loss of bone. The gum presented a natural appearance, with the exception of one slight depression back of the canine, and felt as firm and hard to the touch as before. In this case, Dr. B. was positive there had been no new bone formation.

Dr. Marshall was inclined to think that in the case he reported the periosteum was lifted from the bone, not destroyed, and thus was able to assist in the new formation.

Dr. C. R. Butler, Cleveland, could see no reason why Dr. Marshall or Dr. Briggs should be at a loss to ascertain the condition about the roots in the cases they had reported, or to decide whether the formation was cartilaginous or osseous. The exploring probe would determine the matter surely to the educated touch, with only slight pain to the patient. It does not follow that the pulps were dead, even with the amount of suppuration reported in Dr. Marshall's case, though it may be safe to say that they were dead in many such cases. That should be one of the first points to be determined. We may get contraction of the tissue about the necks of the teeth, sufficient to hold them firmly, where the transverse septa are lost, even when the cancellous portion of the bone has been dissolved out. You cannot have abscess or death of bone wthout suppuration. That is nature's method of getting rid of it. Many overdo their treatment by washing out too much, but more err on the other side by not cleansing as much as should be done. He regretted that we had not a clearer diagnosis of the case. If the bony sockets have been restored, as has been reported, we ought to have some better knowledge of what the evidence is.

Dr. Talbot thought such cases should be managed on the general principles of treatment for carious bone in any part of the body. The necrosed bone should be cut or scraped away or otherwise got rid of, and then reproduction of bone can take place.

Dr. Marshall. I will have the teeth examined on my return to Chicago, and will forward to the *Dental Cosmos*, in time to appear with its report of this meeting, a statement of the condition of the pulps of the left lateral and canine; also, the result of the examination into the character of the new formation in the sockets.

We have pleasure in presenting the following from Dr. Marshall:

TO THE EDITOR OF THE DENTAL COSMOS:

Dear Sir:—As I promised the members of Section 7, of the American Medical Association, I send you the result of the examination made by W. W. Allport and myself of the case of pyorrhœa alveolaris (reported by me for Dr. Allport) relative to settling two points, viz: *first*, if there was really a *new formation of bone* about the roots of the teeth, and *second*, if the left lateral incisor and cuspid were *still vital*. In regard to the *first*, I would say that an exploring needle was passed through the gum in four different places over the roots of the teeth mentioned and between them. In each case it met with *firm resistance* giving evidence to the sense of touch of being bone tissue.

To the second would reply, that on applying a piece of ice the patient exclaimed: "I could have told you that without hurting me in that style." The teeth are quite sensitive to the application of cold, and the color is normal, so that *there can be no doubt about their vitality*.

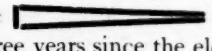
Inasmuch as Dr. Allport is positive that he passed his instrument entirely over the ends of these teeth and scraped and smoothed them there in his treatment of the case, there can be no doubt that the pulp connection at the apex was severed. Now arises the question, how can we account for the vitality of these two teeth? Has there been a union—which is very improbable—of the vessels and nerve and pulp at the apex? Or is the vitality maintained, as Dr. Allport believes, through a vicarious function of the pericementum? The latter view seems to be the most probable explanation of the phenomena, for it has been demonstrated beyond doubt that vessels sometimes penetrate the cementum and dentine, and anastomosis is established between the vessels of the *pulp* and pericementum. Canals for the passage of the vessels have been demonstrated out of the mouth. Dr. Barrett, of Buffalo, N. Y., demonstrated incidentally the fact of their presence while experimenting with a solution of gutta-percha and chloroform as a filling for pulp canals. He found that it penetrated not only the most tortuous canals, but passed through certain canals in the sides of the root having an external opening.

JOHN S. MARSHALL.

Dr. Talbot had had two cases of septicæmia as the result of neglected alveolar abscess. The first was a married lady aged thirty-five. When she went to the seashore some years ago she was suffering from a severe toothache in the left first superior bicuspid, for which she had called upon a dentist. He diagnosed a dead pulp, and the tooth was bordering on alveolar abscess. He drilled through a filling to the pulp-chamber, and treated temporarily, advising her to have it treated properly on her return to Chicago. Having no further pain, she declined to do so for two years. Her health began to fail, she had no appetite, and finally became unable to retain food on her stomach, nourishment being injected per rectum. She had frequent violent fits of vomiting. Last summer she was advised to go to the seashore, where she remained two weeks, when there was considerable swelling of the face—the first thing noticed in regard to her teeth since her troubles commenced. She was sent to me, and, on removing a piece of cotton from the cavity in the tooth the dentist had treated two years before, a most offensive odor issued. She had a vomiting spell in the office, and afterwards was confined to her bed for two weeks, when she commenced to recover. He visited her two or three times a week to cleanse out the cavity. In three or four weeks she commenced to rally, and now at the end of six months her health is completely restored.

The second case was a young lady who called September 7, 1882. She was anæmic; had no appetite; her eyes had been treated for two years for conjunctivitis, without relief. The gums were in an œdematous condition, saliva ropy and mixed with pus; pus discharging from the gums, and also from eight abscesses in different parts of the mouth. Upon exploring a fistulous opening at the margin of the gum between the roots of the left lateral and canine, caries was found to have extended into the antrum as far as the floor of the orbit. Two years previous, while undergoing a dental operation she took offense at her dentist, and since that time nothing had been done to her teeth. Treatment was commenced by removing all foreign substances from the necks of the teeth, cleansing the canals of the teeth with abscesses, and injecting carbolized water into the opening in the jaw; tonics were given to aid digestion. At the end of three months the teeth were in a healthy condition; patient had also improved slightly in appearance, and attention was directed to the carious bone. A tent of cotton inserted into the fistulous opening between the lateral and canine to enlarge it caused intense suffering; patient's face was swollen so that one eye was closed, and the flesh had a bluish cast. The tent was removed and the accumulation of fetid matter evacuated. Morphia was administered to quiet the pain, but there was no stop for thirty-six hours; pulse was high, temperature averaged over 100°. Her family physician attended her with the speaker, and at the end of three weeks she was able to resume her visits to the office. The cleansing process was continued, and in March patient was so much improved that she was sent east to spend the spring months.

Adjourned.

Dr. Henry Barnes, Cleveland, O., said: A married lady, aged about 40 years and mother of six children, came to my office some seven years since. I found a deep groove commencing at the cervix of the superior cuspids on either side and involving all the teeth on the buceal surface, back to and including the second superior molars. This groove, from its point of commencement at the cuspids, gradually and uniformly widened and deepened along its course, the depth corresponding with the width, and about this shape  and size in proportion. About three years since the eldest girl, aged 18, died of consumption, and this spring another girl, aged about 17, also died of the same disease. I do not know of any other hereditary taint in the family. In appearance they are all healthy and robust.

I have not seen the case since that time, and therefore can not report as to its progress. The surfaces of this groove were polished like glass and were translucent, and, to the touch of an instrument, as hard as enamel. I may also add that in the approximal surfaces of all the back teeth, upper and lower, were large amalgam fillings, while gold in front. These had been in for many years. The teeth were good and strong.

CATARRH OF THE ETHMOID CELLS AND THE FRONTAL SINUS AND THE NASAL CANAL—THE CAUSE, DEPOSIT OF EGGS OF THE SCREW MAGGOT (LARVÆ) AND THEIR DEVELOPMENT.

BY FRED. HUMBERT, M.D., F.C.S., ALTON, ILL.

Mrs. F. W., a farmer's wife, always enjoyed good health. On Monday, September 27, 1875, about noon, she was attacked with headache, flushed, burning face, and expected a malarial chill. From that time the pain in the region of the frontal bone, at the root of the nose and below the eye, extending to the right ear, increased. At times the pain was more severe than at others, but never entirely left. These pains were described as dropping, tearing and boring, and so excruciating were they that at intervals, day and night, her cries could be heard at a great distance from the house. Tuesday evening bloody mucus began to run from the right nostril, which was some swollen. This swelling extended on Friday over the whole right side of the face. On this day, the fifth of the complaint, four larvæ dropped out of the right nostril. When I was first called to the patient, October 4, only the right lips and nostril were swollen, the acrid discharge having somewhat blistered the lips below. On introducing the probe into the right nostril it was impossible to pass it to the posterior nares, but it moved with an unusual freedom in the direction of the frontal sinus and cells of the ethmoid. In this direction it would pass to the depth of three and a half inches. The patient lying on her back, head slightly elevated, I injected one ounce and a half of carbolic acid solution, which was retained. When I asked if the fluid passed to the pharynx, she replied: no, but that it was running back and forth in her head. After the injection of an ounce and a half more, the solution mixed with bloody mucus began to flow from her right anterior nostril. This discharge was of an exceedingly offensive smell. After each such discharge maggots dropped from the nostril.

From Monday, when I first saw the patient, this bloody mucus decreased, but the larvæ continued to drop from the nostril. These larvæ dropped out from four to fourteen at a time, till on the twelfth day one hundred and forty or more maggots had thus come out. Each maggot was alive, matured, and seemed to drop so as to find in some sheltered spot a home till fully developed into the fly. On the eleventh day the injected fluid for the first time passed out of the posterior nares, and nearly as clear as when injected. On the thirteenth day soup and drink regurgitated through the nostril. Her speech, which had been perfectly natural, now became scarcely audible from paralysis of the palatine muscle—an affection so often observed in diphtheria. In this distressing malady sleep never came to the patient's relief only at five minutes at a time. The system was well supported. The cavity was washed out with carbolic acid solution, and snuffing warm water, and steam drawn up through the nose; the face and forehead was enveloped in towels wrung out of hot water, which relieved her very much. The fear expressed in the words, "The worms will eat me up!" had to be assuaged by explaining to her the nature of this maggot—that it was not a worm. Through these means some relief was afforded the patient. No narcotic in large doses was administered, fearing lest during sleep the the secretion or maggot might pass into the pharynx. The larvæ were three-fourths of an inch in length, except a few that seemed one line or more shorter and a shade whiter than the others. They were of a yellow hue, conical shape, and had attached to one end, which was more pointed than the other, two horn-like hooks. With my small glass I could count ten distinct rings. Into the meatus nasium medium, the sinus frontalis, the two anterior cells of the ethmoid and the sinus maxillarious opens. Thus the nasal cavities are connected with six sinuses, three on either side. The labyrinth of the ethmoid consists of cells of the finest structure, separated hy thin walls of bone covered with periosteum or simply a layer of mucous membrane. The whole is of a spongy-like structure. When the probe was introduced into the right nasal cavity it moved with great freedom, without pain, in any direction, to the distance of half or three-fourths of an inch below the frontal sinus. It was evident to me that the cavity of the frontal, and more especially that of the ethmoid, was largely dilated, permitting this free movement of the instrument. Evidently the slightest force would have passed the probe into the base of the brain. The fly that laid these eggs must be a species of the ostreus, which deposits its eggs in the noses of sheep and goats, and when developed into larvæ pass up into the frontal sinus of these animals, while other or the same larvæ from a fly pass into the fauces of the deer, into the sluish of horses, or into the wounds or bruises of cattle. Others deposit their eggs on the point of the hairs on the shoulders and legs of the horse, whence they are licked up and carried into the stomach, where they develop into bots. But no one has seen this fly, which lays its eggs in the nose of man in this or more southern latitudes, and which produces the screw-worm (larvæ).

Before 1850, a fly often appeared in warm days in September (after a wet season) in the heavy timber in the American Bottom, between Alton and St. Louis. The teamsters, during their journey through this timber, rubbed the sluishes of their horses with pennyroyal to protect them from this fly, but at that time there never was a fly known which laid its egg in the human nose. A farmer told me that his father, who drove a government team in 1845 from Arkansas to a fort in the Indian Territory, frequently told him that on approaching the Texas line they dared not sleep at noon in the open air, lest a certain fly should deposit its egg in their nostril. Lately a lady told me (when we were speaking of the below reported case) that her uncle moved in 1846 from Indian creek, in this county, to Texas, near the site of the present city of Dallas, and that his and several children of other families died from screw worms, which a fly deposited in their noses, and that they had to remove to other parts of Texas, as they could not let their children sleep in the daytime. Monday,

September 18th, 1882, I was called (in consultation) to see a woman who lived near where the former case occurred. I found her under the effect of morphine. She was unable to hear, or feel any pain. She had at that time discharged 180 maggots from her nose. There was a swelling on each side of the nose, over the union of the cartilage and bone. In the middle of each swelling, which fluctuated, there was a small opening about a tenth of an inch in diameter. I think the maggots, when small, entered one of the openings of the mucous glands, and after maturing, being unable to return through the same channel, as the opening was closed, they then bored or ate through the cartilage and located between the cartilage and skin. I united the holes in one to give them a free passage, and a free discharge to the acrid ichorous fluid there collected. Four maggots came out of it. Before they ceased coming over 300 were discharged from her nostrils. I believe that two flies, at short intervals, deposited their eggs. The attending physician at that time told me that one Dr. Wadsworth had had, two years before, a similar case, with worms discharged. This case was some two miles from Collinsville, in this county. The patient discharged sixty and died. Two weeks after a negro north of Upper Alton suffered in the same way. His physician told him the worms would eat into his brain and he would die, but he recovered. These four cases occurred in Madison county.

The fifth case is reported in the Missouri *Republican* as follows:

The wife of a Baptist minister, nine miles north of La Cygne, Kansas, has died from a strange ailment, at the age of about fifty-five years. She was a sufferer from catarrh for a long while, and by reason of this disease her nose became much impaired. Lately the inside of her nose and parts immediately surrounding the nasal organ inside the head became filled with parasites, and she endured great pain in consequence for eight days, after expiration of which time Dr. B. G. Mendenhall, of this city, had *succeeded* in removing the *last* of a large number of parasites, but she survived only forty-eight hours. (The italics are my own.) I took from the last case, September 18, 1882, twenty-five living maggots, filled a glass jar half full with soil and dropped them on it. They crawled, screw-like, in five minutes into the soil. I then covered the opening with white domestic, hoping that next year they would come out of it as flies; but on October 6 there were fourteen flies in the jar. Reckoning from the time when the patient first felt the pain, it took thirty-nine days for the development of the fly. The fly is about four times as large as an ordinary house fly. The body is a dark glistening green, the eyes of a bronze color and the face yellow. I sent four flies and several maggots to Professor C. V. Riley, of the Smithsonian Institution, at Washington, D. C., for examination and identification. To this day the fly which lays its eggs in the nose of man was not known, but the worms which came out of the nose of animals were known to the ancients, as they believed that the disease called staggers, or turning fits, in sheep, was caused by maggots in the frontal bone, as shown in early history. "No doubt this is why the ancients believed that the larvæ from the sheep's head were an effectual remedy in epilepsy. Of course they were prescribed on the principle that what produced a disease will cure that disease. As early as 560 B. C. Alexander Trallianus tells us that at two distinct utterances the Oracle of Delphi recommended these worms to be used by Democrates of Athens, who suffered with epilepsy." Look at the sage utterances:

> "Quas madidis cerebri latebris, procrecasse capella,
> Dicitur humorus, *Vermem de Vertice* longum.

The other:

> "De grege sume capræ majoris vuvis alumnæ
> Ex cerebro *Vermes; Ovis* dato tergora circum,
> Multiplici vermi pecoris de fronte revulio.

"But as Democrates knew nothing of natural history he asked a man 100 years old, who told him to take the worms which fell from the nose of sheep, tie them in a bag and hang it from his neck." Okens Naturgeschichte, 1835, B. 5, page 77. There is truth in the adage, "There is nothing new under the sun." The priestcraft, preaching through the oracle of Delphi to the people: "The cause of the sickness will cure the sickness," repeats itself in our day in the oracle of Hahnemann, the father of homœopathy, "remove a natural sickness with such remedies as would produce a similar sickness." (*Similia similibus.*) Organ der Heilkunde v Samuel Hahnemann, Dresden, Leipzic, 1833, Pref. page 8. Is there not a striking similarity between the utterances so far apart in time, when seen in the following plain focus, 560 B. C.—"cure the cause with the cause"—1883 A. D.—"cure like with like." Strange that in our enlightened time, when science in all branches of learning has given us such valuable and practical information, that there still remains in some of our highly educated, and, in other respects, so practical citizens, that mystical belief of our dark age, as stated in the garb of homœopathy.

Dieffenbach, in Rust Handbuch der Chirurgie, Berlin and Vienna, 1830, book one, page 203, in an Artical Abcessus Sinus Frontalieum, says: "In some cases insects have been seen to come out of the sinus frontalis, accompanied with great pain in the frontal bone." He mentioned that Burreus de Kanefield in his Institue Medicine Practice, volume 3, section 7, year 1810, collected several cases. The American Encyclopædia, volume 8, page 296, says the musidæ maggot belongs to the m. domesticus vermilacia or S. carnavia which infest the human body, and many cases since recorded in medical journals. The description of the parent of this maggot and their habits are very different from the cases as reported in the books. There has not been in the last fifty years (or further back) a case known in this country where they have been noticed in them, in so thinly settled a country (though observed south) that a living man in life turned into worms. After I had penned the above I received from Professor C. V. Riley, of the Division of Entomology, Smithsonian Institution, an answer to the letter I wrote him when I forwarded the flies and maggots, in which he says: "I am glad to get the fly, as there has been some doubt as to the real parent of the screw worm. These spec-

imens prove to be the lucilia masellaria of Fabricius. See foot note.[1] It is, moreover, interesting to hear of it from Illinois, as it has been considered as essentially a southern insect." He also sent me a page from the *American Entomologist*, December, 1880, in which he says: "A particular fly bit a lady on the nose. A few days afterwards it was discovered that screw worms had formed and made their way under the eye to the brain. Physicians administered calomel, arsenic, etc., and that two hundred worms were discharged. 2nd. Doctor Eaton recently extracted over two hundred from the nose and head of a Mexican boy. Thanks to the doctor's skill, the boy recovered." Professor J. P. Stelle, one of the agents of the U. S. Entomological Commission, says "that pyrethum is a never failing remedy for the screw worm. The application is made by simply dusting a little powder on the sore. The worms are air breathers, and it soon causes them to die."

This is so far good for wounds and bruises, but when the maggots have burrowed high up in the ethmoid cells or frontal sinus if we blow the powder up into the nose we cannot reach them. How can it penetrate the compact mass of two or three hundred maggots? All the laudation that doctors succeeded in extracting them shows merely that they claimed for themselves what belonged to this maggot. As I said before, when they are fully developed they drop and seek another field, the earth, for finishing the metamorphosis. They are not worms which have sexual organs and multiply. They only nourish themselves from the blood, like leeches, and when grown, leave. It is, therefore, very important that this strange and terrible disease should be well understood. That there is no way of abating it, as the maggot's skin is horny, and any chemical applied direct upon them would destroy the mucous membrane and the much dilated bone before it would affect the maggot. Carbolic acid solution, of moderate strength should be injected, to free the cavity from the fœtid, acrid mucous secretion, to relieve the pain, and to prepare a free egress of the maggots. Warm water applications and a just use of chloral are far the best. Olive oil, injected in large quantities to cover the openings between the rings through which these maggots breathe, may effect their early expulsion. But one of the most important things is to make the patient acquainted with the nature of this insect, that they may not, as reported in the New Testament of Herod: "Eaten of worms and died, because he arrogated to himself divine honors." The discharged maggot must not be thrown upon the ground, but be destroyed by fire.

[1] This cannot be the true name. Accidentally the Scientific American of October 13th, 1883, came into my hand, in which my letter of October 7th, 1882, to the Smithsonian Institute, with Prof. C. V. Riley's report, copied from the proceedings of the U. S. National Museum, are printed, and which contains many inaccuracies One of the most important, the Professor made me say: "The head is dark, glistening green, a bronze face, etc.," when I said the head is of bronze color, with a yellow stripe in the middle, the body glistening green. Scientifically, I should have said, the eyes are of bronze color, the face yellow (orange), the body glistening green.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

CONGENITAL ECTOPIA OF THE HEART.—MM. Sappey, Vulpian and Marey have made a lengthy and interesting report as a committee appointed to examine this singular form of malformation to the Paris Academy of Medicine (*Bulletin*, tome XII., No. 42). The subject was a woman in whom the sternum was bifid, the linea alba markedly thinned down to the umbilicus, and the diaphragm divided in its anterior portion so as to allow of the beating of the heart under the hand, only separated from it by a thin layer of the soft parts covered by a lax, wrinkled and pigmented skin. The ventricles were small, their long axis being directed vertically, hanging towards the abdominal cavity, In palpating the epigastric region above an umbilical hernia, an intestinal protrusion was found of a circular form and of about 7 centimeters diameter. Above this was the triangular space in which beats the heart. This space is limited above by the sternal fissure, to the sides of which descend in diverging the costal cartilages. The superior portion of the sternum remains intact, in a length of 8 centimeters; the triangular space is limited inferiorly by a fibrous band, which forms the superior border of the intestinal protrusion mentioned.

The whole of the ventricular portion of the heart can be explored and seized between the fingers. Auscultation showed a nearly normal action, there was a systolic souffle quite intense and prolonged, seated at the base of the heart, and apparently due to a narrowing of the aortic orifice; the antecedents of the subject disclosed none of those diseases which ordinarily produce organic affections of the heart. The sense of touch established beyond doubt the fact that, at the moment the ventricles diminished in size and hardened, the finger was strongly pushed upon, and that it is the systole which produces the heart beat. This phenomenon was noted not alone at the apex of the heart, but throughout the whole superficial area of its ventricles from the apex to the auriculo-ventricular septum.

Two clinical polygraphs were applied, one to each ventricle, and gave a perfectly synchronous record, which differed only in amplitude, the pulsation of the right ventricle being the most feeble, on account of the lesser degree of pressure exercised upon the blood in that cavity. This synchronism continues during the disturbances of the heart from different causes. The simultaneous inscription of the changes in volume of the ventricles and of their pulsations was effected by means of a funnel-shaped vessel which was made to enclose the ventricles and act through the influence of the contained compressed air upon the recording levers, while an explorer of the pulsations was applied to that part which remained outside of the vessel. In the first period the ventricles changed their form and became less hard, the ventricular mass took an elongated form, and pressed further into the vessel; in this period the blood did not escape from the ventricles as is shown in animals by marking the

degree of pressure of the blood in the ventricle and aorta. The second period establishes the evacuation of the ventricles, diminution in volume of these organs, and the period of pulsation. The third period established a post-systolic repletion of the relaxed ventricles, and showed that the repletion commenced as soon as the systole was finished.

The aorta was readily reached and compressed through the thinness of the linea alba, and two tracings were taken simultaneously—that of the femoral pulse and the pulsation of the left ventricle. The pulsations of the heart were slightly diminished and their form modified so as to show an increase of resistance on the part of the ventricles at the end of their systole. When the compression ceased, pulsation in the femoral recommenced, the heart was much accelerated in its movements, and the pulsations were feebler.

The positive tracheal pulse was well marked. This name has been given to the pulsation produced by holding between the lips a tube leading to the registering tambor, when a tracing is produced, in a subject of normal conformation, that is synchronous with the heart beat, and is formed by the movements of the air entering into and passing out of the lungs, under the influence of the heart, as, when the ventricles are emptied, the heart occupies less space in the thoracic cavity and creates a vacuum, which provokes an *entrance* of air through the trachea. Furthermore, the blood with which the right ventricle distends the pulmonary artery and its vessels displaces a certain quantity of air, which tends to pass *out* of the lung. In effect, the force of aspiration predominates, making the tracheal pulse negative. But when there is a solution of continuity in the thoracic walls, the lungs are no longer under the influence of the change of movements of the heart, and the tracheal pulse becomes positive in recording the result of the penetration of the blood into the branches of the pulmonary artery—that is to say, an expulsion of air with each systole of the ventricles.

These observations sufficed to show, in the opinion of the committee, that the results of physiological experiments, made upon the larger mammalia, can be perfectly applied to the knowledge of the mechanism of the human circulation.

Animal Rotation.—M. Delaunay has given some curious results of his study of this subject, in a communication to the Société de Biologie (Comptes Rendus). He finds that certain animals always turn to the right, while others turn to the left, others indifferently to either side. In the human species, however, he finds a peculiar condition of things. M. Delaunay calls rotation to the right the movement in which the right shoulder is carried backward while the left is carried forward, rotation to the left being the opposite. Either foot is used in a certain proportion, as in the waltz; but when the individual turns round several times without changing his place, he does it on his right foot if he turns to the right, and on his left foot if he turns to the left.

Certain of the inferior races of men do not rotate, as the Canaques and the Negroes. The middle races turn to the left, as the Chinese, Japanese, Turks, Brazilians, Mexicans, Araucanians, Kalmuks. Others turn both ways—Hindoos, Moroccans, Tunisians, Transylvanians. The superior European races turn to the right; however, the proportion of individuals turning to the left is considerable in Portugal, Spain, Greece, and also in England, Italy and Germany. In Hungary the *sezardasez*, the national dance, which was danced to the left in the time of Charlemagne, is to-day danced to the right.

In France, in all the national dances rotation is to the right. All treatises on dancing proscribe turning to the left as contrary to usage and propriety. The teachers of dancing who teach rotation equally to either side, declare that their pupils become dizzy sooner when they turn to the left. Ballet dancers execute their feats most effectively on the right foot. The left foot and leg are so far wanting in this facility, that they have to be exercised to double the amount in preparing for the ballet. Women, according to M. Delaunay, as a rule turn equally well to either side, and many prefer rotation to the left, so turning when they dance with each other.

Children turn at first to the left; then as they grow larger they turn to the right. In 68 children of from 3½ to 7 years of age, 38 turned to the right, 19 to the left, and 11 indifferently. At 10 years of age they turn generally to the right. The children which turn to the left are weaker than the others. The great majority of idiots turn to the left. Those who are left-handed turn more readily to the left.

The conclusion of all this is, that rotation to the left being controlled by the right cerebral hemisphere, it predominates in the inferior races, in women, in children, and in the weak-minded. On the other hand, the left cerebral hemisphere, which controls rotation to the right, predominates among the superior individuals—men, adults, and persons of intelligence. M. Delaunay intends to carry this study further into various movements, the sensations, and even into the moral and intellectual faculties, as expressed by muscular movements on one or other of the sides of the body, but never on both with the same degree of intensity.

OBSTETRICS AND GYNÆCOLOGY.

A Pomade Pot in the Vagina for Four Years. —Extraction.—As a companion article to the one reported in this journal (No. 18, Nov. 10) on the extraction of a pomade pot from the rectum, we give the following as reported by Dr. Aubeau in the *Gazette des Hopitaux*. We see by these notes that the excessive fondness of our French neighbors for pomades does not confine itself to the use of the preparation simply, but extends also to the vessels which contain it:

The case in question is that of a young girl twenty years of age, small, ill-looking, and apparently at the last stage of anæmia and emaciation, affected with extreme nervousness, occasioned not only by her feeble and suffering condition, but also by the general reprobation of which she was the object. Accustomed from infancy to vicious practices, when fifteen and one-

half years of age she introduced a pomade pot into the vagina. Once beyond the vulva, it became impossible to remove it. She kept this secret until vaginal catarrh, suppression of the menses, obstinate constipation, rectal and vesical tenesmus obliged her to confess. Two years and a half later a physician attempted its removal, succeeding only in breaking off fragments from the edges of the pot. Other attempts were made during anæsthesa, resulting in a slight hæmorrhage, severe pains and the discharge of urine from the vulva.

She declared to Dr. Aubeau that the pot was small, cylindro-conical in shape, and introduced by its smaller end. The appearances as observed by him were such as might be expected from the previous history, of extreme irritation to the external parts. The hymen was seen to be partially preserved. By vaginal touch a foreign body was felt a phalanx high in the vagina—hard, solid, a little roughened, and giving the sensation of a phosphatic vesical calculus. On attempting to remove it, it was felt to have swollen behind the pubis and ischiæ, to have become spheroidal and to be wedged into the cavity, pushing the rectum backwards and the bladder forwards. In effect, the vagina was filled with an inmovable calcareous mass, in size and shape like that of a duchess pear. At no point could the smooth and polished surface of the glass be felt. Its consistency was found to be friable like plaster, and accordingly, by the means of dressing and artery forceps, a spatula and a cautery in the shape of a spoon, Drs. Aubeau and Lefebure, in the country village where she lived and where more suitable instruments were not obtainable, proceeded to remove it. In about a half hour they had scraped their way down to the pot itself. Then, by applying a crown of artery forceps to the edges so as to protect the mucous membrane, and separating and protecting the lips of the vulva, by carefully drawing upon it they succeeded in the removal of a pomade pot four centimeters in diameter and six centimeters in length. The operation occupied an hour and a quarter. When the vagina was completely emptied, its overdistended walls did not immediately contract and enabled them to find the uterus, although pressed very high up to be healthy, and a small perforation through the vesico-vaginal septum on a level with the neck of the bladder. From this time everything progressed favorably. A month later the vesico-vaginal fistula was treated with success. The menses returned, and four months later the patient married. Now—four years since the removal—the patient is in a very satisfactory local and general condition, inclining to be not only stout but obese.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

POISONING BY AN INFUSION OF FORTY-FIVE GRAMMES OF THE LEAVES OF DIGITALIS. RECOVERY.—Dr. Antonin Martin (*Le Courier Médical*) reports a case of this character to the Society of Medicine, of Paris, in a man 40 years of age. He remained for twenty-two hours after taking the drug without medical aid, and was under treatment for two weeks. The dose taken was equivalent to an infusion containing 0,040 milligr. of digitaline. The first symptoms were those of irritation of the stomach and intestine, but the symptoms produced by the action of digitalis upon the nervous system did not appear for forty-eight hours. The pulse rate was reduced in the first twenty-four hours to 25 per minute; second day, 29 to 35; third day, 40—remaining about this rate for several successive days; but when the patient was discharged at the end of the two weeks his pulse rate was only 48. Dysuria was marked from the first, the patient urinating three or four times an hour, and only a few drops at a time for the first twenty-four hours; later, the secretion was more abundant, but the dysuria continued for a week. Marked aphasia was present from the fourth to the eighth day, when it disappeared. On and after the second day severe cephalalgia set in, which persisted for eight days. The affection of vision was marked and peculiar; there was:

1. A diminution in visual power for near or distant objects, as shown in the want of ability to read a newspaper, except its title, and the inability to read a sign 30 centimeters high, at a distance of 50 meters.

2. A modification in the vision of colors—the patient saw everything *green*.

5. A vacillation of small objects; the letters oscillated.

4. A certain deformation of objects, and particularly their inclination to the left to about 45°. The letters on the signs were bent to the left, and the windows, equally bent, seemed lozenge-shaped.

The visual disturbance continued for fifteen days. Before and after the poisoning the vision was normal, and the ophthalmoscope failed to detect any lesion on the twenty-fourth day.

SURGERY.

SYPHILIS IN THE MONKEY.—M. Martineau presented to the Société Médicale des Hopitaux of Paris (*Gaz. Hebd. de Med. et de Chir.*) the wax moulds of new syphilitic lesions observed in a monkey upon whom he had inoculated three infecting chancres eleven months before. The monkey, in whom the chancres appeared the 28th day after inoculation, and who presented consecutively papulo-erosive and diphtheroid syphilides of the penis; inguinal, axillary and sub-maxillary adenitis, as well as a marked emaciation; all of which have now disappeared with several plaques of alopecia on the head and back, has been attacked on the tenth month with an ulcerating lesion of the palatine mucous membrane. This ulceration ran a regular course of development and repair, and was finally replaced by a simple patch, paler and yellower than the surrounding mucous membrane. The evolution of syphilis, then, in the monkey, continues normally, in the same limits as in the man, and toward the tenth month exhibits an ulcerating syphilide. M. Martineau intends to continue his researches; he possesses a couple of monkeys of the same species, upon whom he intends to experiment with direct inoculation and the transmission through copulation; he hopes to obtain a reproduction of these animals, and so to study hereditary syphilis.

REMOVAL OF A LARGE CYSTIN CALCULUS BY SUPRA-PUBIC LITHOTOMY.—John Tremeane, M.R.C.S. Eng., reports this case in the *Australian Medical Journal*. The calculus was 2½ inches long 1¾ inches broad, 1 inch thick, circumference 7 inches and weight 2½ oz. 54 grs. (1.254 grs.), composed of pure cystin.

RETENTION OF PLACENTA AFTER DELIVERY IN A UTERINE POCKET.—Prof. Herrgote (Memoires de la Societiè de Medicine de France) relates a case, with admirable illustrations, of what he calls *enchatonnement* of the placenta. It is not easy to translate this phrase satisfactorily, but it signifies a condition of things which would resemble closely what we know as the hour-glass contraction of the uterus, were it not that there is an independent pouch projecting from the walls of the uterine fundus which encloses the placenta. The case, so far as the phenomena of labor and delivery of the child is concerned, appears to have been normal. The history of the case showed that bad treatment during pregnancy had been sustained, such as kicks upon the belly and three falls upon the back upon the staircase; but this treatment did not seem to be followed by any ill effects. The placenta not coming away in due time after delivery of a child by vertex presentation, abdominal palpation found the uterus two finger breadths above the umbilicus, hard and markedly bi-lobed. The principal lobe was the highest and to the right. Attempts were made to remove the placenta by introducing the hand into the uterus, and it was found to correspond in situation with the upper abdominal tumor—the cord attached and passing through a narrow orifice, which only admitted two fingers. The cord was detached from the placenta by the traction made upon it, and the constriction would not yield to any efforts at dilatation. No further efforts at removal were made, and the patient died of purulent peritonitis at the end of the fifth day.

The post-mortem showed a uterus having a long axis, directed superiorly to the right, measuring 0 m .17. The entrance of the right fallopian tube was seen to be on a level with the constriction, which led into a lobe measuring 0 m .07 in diameter, and 0 m .07 in height. The origin of the left fallopian tube was 0 m .03 below the seat of constriction. The uterine walls were firm throughout, being of the thickness of 0 m .015 in the body of the uterus and of 0 m .003 in the punch or lobe which contained the placenta.

This examination showed that the condition was not due to a vice of conformation, to a duplicity, complete or incomplete, of the uterus; that it was not produced by a spasmodic contraction of the womb, but that it rather resulted from the non-contraction of that portion of the uterus upon which the placenta was attached, and which was afflicted with inertia, while the remaining portion of the uterus contracted, thus being passively distended over its contents and thinned in its walls, becoming a true hernial pouch on the uterine surface, the constriction to which became more and more pronounced as the body of the uterus diminished in size.

MEDICINE.

INFLUENCE OF MORPHINISM ON PREGNANCY.—In the Société de Biologie, of Paris (Comptes Rendus), M. Ch. Féré gave his observations in a young woman of twenty-two years, who was hysterical and the daughter of a hysterical mother, who was addicted to morphinism. She had been using morphine freely for three years, at first for facial neuralgia, when she became pregnant. It being deemed advisable to diminish the dose, she was taken with intense uterine colics.

At the time the dose was diminished she was taking 24 centigrammes of chlorhydrate of morphia per day hypodermically, and was six months advanced in pregnancy. At the time of her confinement she was taking only 16 centigrammes. M. Tarnier attended her through a normal labor. A progressive diminution of the dose of morphine was continued, but at each effort at reduction the uterine colics were reproduced, and the uterine contractions checked the discharge of the lochia, causing a complication which required much care in the degree of diminution.

With the child there were also curious phenomena noted. During pregnancy the active movements of the child seemed to resent the absence of the morphia. After birth the child remained sixty hours without sleeping. There was evidently in this a relation between the absence of morphia in the mother and the insomnia in the child.

GENERAL PARALYSIS AFTER DIPHTHERIA.—The *Australian Medical Journal* gives two cases of this rare sequel to diphtheria. The first is a case reported by W. Snowball, M.B., in a female child of four years of age. Four weeks previous to her being first seen by the doctor, she had what her medical attendant called an attack of "ulcerated sore throat," which lasted about 7 days, and her present symptoms dated from that period. The throat gave evidences of its previous ulcerated condition in enlarged tonsils and a scar on one side. There was no paralysis of the palate muscles, and she swallowed well, was healthy looking, and well nourished. Two weeks later she had lost all power in her legs from below the knees, patellar reflex absent. Four days later in addition, paralysis of the right arm and fore arm; ptosis of right eyelid. The next day the intercostal and pectoral muscles became affected, and the child died of apnœa.

The second case is reported by Dr. James Jamieson in a young man twenty years of age, who, when in the country, had a very mild attack of diphtheria; the disease in the house was very severe among the children, one of them dying of it. The throat affection was very slight after recovery, nor was there any loss of strength or of sensation of any part of the body. After a few days, however, of an unusual amount of walking, he complained of a weakness of the legs, and on examination exhibited distinct signs of paresis of the legs with numbness of the feet, specially felt on standing, and absence of patellar reflex. He had none the less, good power of resistance against efforts to flex or extend the legs. He became steadily worse, the paralytic symptoms extending to the arms, but

no eye or throat symptoms ever manifesting themselves. By treatment with massage mainly, in a couple of months he was well on to recovery.

NEW INVENTIONS.

THE GASTROSCOPE.—Mr. J. Leiter, of Vienna, has constructed a singular modification of the microscope, to which the name of gastroscope has been given. Its use is for exploring the interior of the stomach. It consists of a metal tube, 65 c.m. long and 15 m. m. thick, bent at an angle of 150° at about one-fourth of its length from the lower end. At the lower extremity is contained an incandescent electric lamp for illumination of the interior of the stomach, and an objective, at the back of which is a prism to reflect the pencil along the length of the tube; at the bend it is again reflected by another prism to the eye-piece. Provision is made for a circulation of cold water to prevent the lower end of the tube becoming inconveniently hot.—*Medical Press.*

CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING THE WEEK ENDING DECEMBER 1, 1883.

Medical Inspector D. Kindleberger, to be relieved from duty on the retiring Board on the 9th of December.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM NOVEMBER 23, 1883, TO NOVEMBER 30, 1883.

Wolverton, William D., Major and Surgeon: assigned to duty as post surgeon at Washington Barracks, D. C. (Par. 7, S. O. 222, Department of the East, November 27, 1883.)

Merrill, James C., Captain and Assistant Surgeon: relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio. (Par. 7, S. O. 270, A. G. O., November 24, 1883.)

Appel, A. H., First Lieutenant and Assistant Surgeon: relieved from duty at Fort Warren, Massachusetts, and assigned to duty at Madison Barracks, N. Y. (Par. 4. S. O. 217, Department of the East, November 21, 1883.)

Brewster, William B., First Lieutenant and Assistant Surgeon: extension of leave of absence granted September 15, 1883, further extended two months. (Par. 4, S. O., 271, A. G. O. November 26, 1883.)

Maddox, Thomas J. C., First Lieutenant and Assistant Surgeon: granted leave of absence for two months. (S. O. 136, Department of the Missouri, November 24, 1883.)

WE have reason to believe that a Medical Congress will be held at St. Petersburg next October, for the purpose of discussing all matters connected with cholera. M.M. Charcot and Pasteur, and other European authorities, are said to have promised to be present.—*British Medical Journal.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, DECEMBER 8, 1883.

OHIO STATE SANITARY ASSOCIATION.—From a letter and circular published by R. Harvey Reed, M.D., Mansfield, Ohio, we learn that an active effort is being made in that State to organize a State Sanitary Association, to be composed not only of medical men, but of all citizens interested in the subject of sanitary science and the prevention of disease. That such an organization, meeting in general session once or twice a year, and more frequently in Sections in different parts of the State, could do very much to enlighten and direct public sentiment, not only in regard to the preventable causes of disease, but also in regard to the necessity for the enactment of wise and just laws for the promotion of the public health, there can be no doubt. The value of popular meetings for the consideration of topics pertaining to the sanitary interests of the people, when under judicious guidance, has been fully demonstrated by what has been accomplished in Michigan under the superintendence of her State and local Boards of Health. We trust the movement in Ohio may be successful in ultimately developing in that great and prosperous State a permanent and practically efficient health organization, one of the leading objects of which shall be to teach each individual citizen how to maintain a proper sanitary condition of his own premises.

THE PROPER MATERIAL FOR MEDICAL SOCIETIES.

BELTON, TEXAS, Nov. 13, 1883.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Dear Doctor:—We are on the threshold of organizing a local Medical Society, which is to be auxiliary to our State

Medical Association, and as the latter may be considered a "part and parcel" of the American Medical Association, we do not feel disposed or authorized to go into an organization with material at war with the *spirit*, if not the *letter* of the Code of Medical Ethics, as recognized by the National Society. *Therefore*, we most respectfully ask you if the following would be *suitable material* out of which to build up a local organization, viz.: (we will suppose a case) "Dr. Wm. Blank, Physician, Surgeon and Aurist, Chicago, Ill. Dr. Blank has made all diseases of the *ear* a study for several years, and has gone to considerable expense in preparing himself to treat scientifically the same. He gives, in addition, *special* attention to the therapeutics of female diseases. He makes no charge for writing prescriptions, if the party will have them compounded at the drug-store of his friend, John Smith & Co. If desired, the best of references given.

Now, Dr., we have given you a case. We are satisfied we are well acquainted with your individual or private opinion on this question, but we would be gratified and *profited* to have from *you* your views through the pages of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Being a member of the Association, and consequently a subscriber to the JOURNAL, we feel that we have a right to ask the counsel and advice of its editor on questions of such vital importance to the stability of our *parent* orgauization. Your answer to the foregoing question will have a salutary influence from one extremity of this great country to the other, as the same difficulties are constantly arising. Please let us hear from you. Very respectfully,

H C GHENT.

Although the questions raised by our correspondent in Texas have been substantially answered in the recent editorials on medical advertising and ethics, yet it will do no harm to devote a few words to the analysis of the supposed card of Dr. W. Blank, as given above. First, the use of the title, "Aurist," in addition to those of Physician and Surgeon, is expressly forbidden by the resolution adopted by the American Medical Association in 1869. Second, all that is said in regard to extra study and preparation for treating diseases of the ear "scientifically," and the giving, "in addition, *special* attention to the *therapeutics* of *female* diseases," is directly intended to invite the attention of persons affected with particular diseases, and is, consequently, in direct violation of a well known clause in the National Code of Ethics. Third, the promise to write prescriptions gratuitously, provided they are to be filled at a particular drug-store, would plainly indicate a corrupt and dishonorable collusion between the physician and druggist, which should render both unfit for membership in any respectable society.

Consequently, Dr. Blank could not be considered good material, or, in other words, a proper person for membership in a regular medical society. Neither could a society known to be composed of such members, be considered as eligible to representation in the American Medical Association.

THE INTERNATIONAL REVIEW OF MEDICAL AND SURGICAL TECHNICS.—This is the title to a proposed new periodical, to be published at 51 Union Park, Boston, Mass., and edited by Drs. Joseph R. Warren, Charles Everett Warren, and W. Everett Smith. Some idea of its scope and purposes may be gained from the following paragraph, taken from the announcement sent to us by the editors:

"This *Review* will be issued quarterly, upon the first of January, April, July, and October, and will be devoted chiefly to the description, illustration, and discussion of instruments, appliances and methods of operation that have been recently devised or published. The manufacture, use, care, and repair of instruments, as well as makeshifts and expedients in case of emergencies, or inability to procure the instrument desired, will receive especial consideration. Reports of the history, properties and medical use of drugs will not be published, being foreign to the purpose of the journal; but descriptions of new devices and methods for preparing and administering drugs will be noticed. Descriptions will in all cases be as concise as is consistent with clearness, and nothing that is of value to the profession, and is known to the editors, will be omitted. The original articles of contributors will be published in full whenever it is practicable so to do, and articles from foreign journals will be translated by a competent person and revised by the editor in charge, so that the *Review* will be international in fact as well as in name."

NEWS ITEMS.

MEDICAL TITLES.—Our provincial cousins "over the water" have shown a great deal of temerity lately in discussing the value, to the medical man, of the quality of the titles graciously bestowed by Her Majesty; and her Irish subjects have been indignant that they did not receive proper consideration in the distribution of such marks of honor. The latest comes from the *Australian Medical Journal*, which criticises the advertisement of a medical gentleman who styles himself "late assistant to the surgeon to the Queen." This is probably not a title conferred by official act, signed and sealed with due ceremony. Nevertheless, it has in part a familiar sound, and the *Journal* supposes that what is intended to be conveyed to the simple minds of the uninitiated general public is that the gentleman who thus describes himself was in the habit of running over to Windsor Castle, or up to Balmoral, when the Queen was a little out of sorts, and his principal was too busy or otherwise unable to attend in person. In our own country, the late lamented J. Marion Sims might with truthfulness have written "medical consultant to the crowned heads of Europe," but we never heard that he did it, or anything approaching to it. How would it sound for Bliss to say, "Surgeon in charge to his lately deceased Excellency, the President of the United States." Would he say also, "by permission." Let us not go too fast, however, in this criticism. The older members of the medical corps of the U. S. Army and Navy seem to have always been satisfied with the title of Doctor, but the younger men must

now be called Lieutenant and Captain, and the Majors and Colonels are not totally exempt. If the proposed bill to Congress from the Pharmaceutical Association is adopted we shall have to be careful to call the naval apothecaries Ensigns in the future.

THE PROPOSED FRENCH MEDICAL REGISTER OF THE WORLD.—In the project for the construction of a medical library in Paris (*Union Médicale*), it is proposed to make a special register for the insertion of the names of all medical practitioners legally pursuing their profession throughout the principal countries of the world. It appears that the number of medical practitioners, spread over all parts of the globe, amount to 193,000, viz: United States 65,000; France 26,000; Germany and Austria 32,000; Great Britain and her colonies 35,000; Italy 10,000; Spain 5,000.

SOCIETY PROCEEDINGS.

MINUTES OF SECTION SEVEN, ON DENTAL AND ORAL SURGERY, MEETING OF AMERICAN MEDICAL ASSOCIATION IN CLEVELAND, JUNE, 1883.

The Section was called to order by the Chairman, Dr. Goodwillie, of New York, and the Secretary, Dr. Brophy, occupied his position.

Dr. Williams, of Boston, moved that a committee of three be appointed by the chair to whom all papers be referred before being delivered to the Permanent Secretary of the Association. Carried. The committee appointed were Drs. Williams, Marshall, and Brophy.

REPORTS OF COMMITTEES.

The report of the Committee on the appointment of dental surgeons in the army and navy was deferred until the ensuing session.

The Committee on food and its relations to the various tissues of the body were granted further time to report.

Dr. John S. Marshall, of Chicago, read a paper on "Denudation or Erosion of the Teeth."

At the conclusion of the reading of Dr. Marshall's paper, Drs. Hayden and De Nickel, of New York, stated that Dr. Goodwillie had not properly registered, and was not therefore qualified to preside at the meeting. They further stated that Dr. Goodwillie had subscribed to the New York State Medical Society's Code of Ethics, in consequence of which a protest had been entered against his registering in this association.

Dr. Goodwillie stated that he had registered, protesting himself against signing a pledge (which all members were required to sign) to abide by and support the Code of Ethics of the American Medical Association. He had been informed before leaving home that there would be no objection to his presiding over the Section.

A point of order was raised—namely, that the communication of Drs. Hayden and De Nickel was non-official and consequently could not be received. The communication was subsequently made official by Dr. X. C. Scott, Chairman of the Committee of Arrangements, who also informed the Section that Dr. Goodwillie's case had been referred to the Judicial Council.

Pending the action of the Judicial Council on the case, Dr. J. L. Williams, who had occupied the chair while Drs. Hayden and DeNickel were making their statement, was elected temporary Chairman.

The paper of Dr. Marshall was then discussed.

Dr. Shattuck reported a case of canine cyst in antrum which he successfully removed.

Dr. W. W. Allport read a paper reporting a case of "Amaurosis Dependent on Dental Irritation."

At the conclusion of the discussion of the paper the Section adjourned.

Section called to order by the Chairman, Dr. Williams.

In the absence of the authors of papers at the opening of the session Dr. Marshall reported a case of pyorrhœa alveolaris occurring in the practice of Dr. W. W. Allport.

Dr. Talbot reported a case of septicæmia resulting from alveolar abscesses.

At the conclusion of the discussion of these cases the Section adjourned.

THIRD DAY—JUNE 7.

Dr. Williams resigned the chair and Dr. W. W. Allport, Chicago, was elected temporary chairman of the Section.

A paper on "Diseases of the Maxillary Sinus," by Dr. Geo. L Parmele, Hartford, Conn., was read by the secretary.

Dr. Parmele's paper described the anatomical relations of the antrum of Highmore to the teeth, the nose, and the eye, directed attention to the consideration of the diseases of the teeth which affect it. Some of these are formidable, but most of those which come under the notice of the dentist are simple and easily cured, but if neglected or improperly treated they may assume so aggravated a form as to endanger the life of the patient, and we should so familiarize ourselves with the various manifestations as to be able to correctly diagnose and treat these cases. The principal diseases of this class are inflammatory distention of the antrum; dropsy or mucous engorgement; foreign bodies or wounds. The cause of inflammation of the living membrane, causing distention, can be ttaced in the majority of cases to a diseased condition of the superior molar and becupsids. Sometimes, also, it may be occasioned by the dentist facing irritating substances through the apical foramen in the treatment of devitalized pulps in teeth whose roots extend to the antrum. Blows upon the face or injuries in extraction may cause inflammation, or it may be an extension of catarrhal disease from the nasal cavity; or it may be set up by foreign bodies entering from without or from within the mouth. As a general rule, treatment is quite simple; over treatment in many cases retarding a cure. Often the mere extraction of a diseased tooth is all that is called for, generally the first molar, and if on doing this the antrum is not reached, the perforation of the cavity by means of the dental engine. Even in doubtful cases it is well to

perforate to ascertain what the contents may be. Some prefer perforating the alveolus above the gum; but the opening should be at the lowest point possible. Vent should be maintained till the mucous membrane has regained its normal condition, and the cavity should be carefully cleansed with injections of tepid water, to which is added some antiseptic. Often this is all that is necessary, but sometimes frequent injections of tepid water followed by stimulating injections must be employed. Among the causes of mucous engorgement of the antrum are diseased teeth, exposure to cold, blows, etc. The first aim in treatment is to evacuate the contents of the cavity and remove the cause. The opening should be maintained with plate and tube until by the use of stimulating and astringent injections, the parts have regained their normal condition, when the opening may be allowed to heal. In case of wounds of the antrum the bleeding is always slight. The treatment is simply to remove any foreign body which may be present, and keep the parts clean and free from inflammation. In endeavoring to extract foreign bodies from the antrum, it should be remembered that the cavity is occasionally divided by partial septa of bone projecting from its walls, forming pockets from which the body can only be removed by introducing curved scooping instruments. This condition would also naturally interfere with thoroughly cleansing the cavity by injections.

Dr. Allport related the case of a gentleman whom he met some months since, the side of whose face was badly swollen. Two or three surgeons, who examined the growth with the microscope, pronounced it cancer. The gentleman was shortly afterwards in Cincinnati, and called on an old dentist in Covington, who examined his mouth and found the floor of the antrum entirely removed, and with a bistoury made a free incision. The fetor was very strong and soon filled the whole house. With a scoop-shaped instrument he began to haul out of the cavity a substance about as hard as hard cheese, something like little worms, and kept on until nearly a teacupful had been removed. It took nearly an hour. At the end of two weeks the gentleman returned to Chicago. There were little reddish-blue patches on the inside of the antrum. The dentist who made the operation thought that he had demonstrated that there was no cancer, but Dr. Allport had since been informed that cancer had appeared in the antrum.

Dr. L. Buffet, Cleveland: The case just reported is right in the line on which the work of this Section ought to go. The trouble in the antrum had its origin in a local trouble, and was non-malignant at first. Undoubtedly it arose from the teeth, the watery portion of the infiltration into the antrum passing off, and the solid mass growing until the floor was entirely absorbed. The presence of the decomposing mass may have been the means of lowering the physical condition so as to permit the development of the cancer, if it was not inherited. If children are begotten by him after this they will have the cancerous diathesis, and by them it will be passed on to the generations. Cancer can be developed, if the cancerous diathesis is present, the same as scrofula can, by poor living.

Dr. Shattuck recently had an interesting case of disease of the antrum. The patient's physician had been treating him for neuralgia; there was some enlargement of the cheek, and he found the left superior cuspid absent and the second molar badly decayed. He came to the conclusion that there was something wrong with the antrum. He extracted the decayed tooth, the extraction being followed by a free flow of pus. There was no trouble in passing the probe through the opening into the antrum, where it struck something hard, which proved to be the missing canine. On being removed, its end was found to be necrosed, and it was somewhat honeycombed. The cavity was injected with warm water and the parts readily healed.

The subject was passed.

Section adjourned *sine die*.

BOOK REVIEWS.

LECTURES ON ORTHOPŒDIC SURGERY AND DISEASES OF THE JOINTS.—Delivered at Bellevue Hospital Medical College, during the Winter Session of 1874–1875. By Lewis A. Sayre, M.D., Professor of Orthopœdic Surgery and Clinical Surgery in the Bellevue Hospital Medical College, etc., etc., etc., etc. Second Edition: Revised and Greatly Enlarged, with 324 Illustrations. New York: D. Appleton & Co., 1883.

It is seven years since the first edition of this work was issued from the press, and became familiar to a large part of the profession. In preparing this second edition for the press, the author has carefully revised and rearranged the entire work, rendering it more systematic and complete. The chapters on spondylitis and lateral curvature have been entirely rewritten. This thorough revision has not only rendered the present edition more methodical in the arrangement of topics and more full in their consideration, but it has corrected some errors in dates that had been found in the first. Many pages of new matter and fifty-two new and excellent illustrations have been added to the present volume. The work embraces thirty-two lectures, originally delivered in the amphitheater of the Bellevue Hospital Medical College, in which are discussed and illustrated the following topics: History of Orthopedy; Deformities; Malformations; Talipes; Diseases of the Joints; Diseases Which Simulate Diseases of the Joints; Anchylosis; Diseases and Deformities of the Spine; Deformities Resulting from Paralysis; and miscellaneous topics, as Corns, Bunions, Ingrowing Toe-Nails, Hallus Valgus, and Displacement of Tendons. The second topic occupies four lectures; the third, one; the fourth, five; the fifth, twelve; the sixth, two; the seventh, two; the eighth, two; the ninth, two; the tenth, one. From the general topics named, and the number of lectures given on each, the reader will see that they embrace the whole field of orthopœdic surgery; and in no one volume will he find a more thoroughly practical discussion of each topic, or plainer and safer rules for his guidance in practice. If the zeal of the author sometimes gives

to a lecture a controversial tone, it only serves to enliven the reader and increase the activity of his thoughts. Like all who become leaders in any department of human life, instead of followers, the author's inventions and novel methods for the treatment of many important diseases and deformities, have made him, at different times, the subject of severe criticism. But his genius, sustained by a boldness and industry possessed by only a few, has enabled him to overcome all obstacles, and to have accomplished more than any other one man in placing the department of orthopœdic surgery in the prominent position which it now occupies before the profession.

The present volume is fully illustrated throughout, not only by a large number of excellent cuts and photo-electrotype engravings, but by numerous, well-selected cases, embracing almost every variety of orthopœdic disease and deformity. It is consequently well adapted for the use of both students and practitioners. The volume is a full-sized octavo, containing 569 pages, executed in the usual good style of the well-known publishers; and its contents will remain a monument to the genius, industry and zeal of the author, more durable than shafts of marble or pillars of granite

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REPORTS FROM THE CONSULS OF THE UNITED STATES ON THE COMMERCE, MANUFACTURES, ETC., OF THEIR CONSULAR DISTRICTS. No. 32. August, 1883. Published by the Department of State, According to Act of Congress.

There is generally something of professional interest to be found in these reports, and in the present number there is a report by Consul Tanner, of Liege and Verviers, on American Proprietary Medicines in Belgium, the tone of which is not very pleasing to the American medical practitioner. Consul Tanner is evidently doing all he can, and with self-commendation for his efforts, to introduce patent medicines abroad. He incloses an advertisement (not given) in the form of an American flag, 3½ by 6½ inches, with the reading matter (in French) on the white stripes, extolling Hop Bitters, which he says is distributed throughout the city and handed to every passer-by. He says: "Since my dispatch No. 27 I am glad to see other familiar medicines in the windows here, among them Allen's Hair Vigor. An idea pervades people that things that are foreign possess superior virtues to those found at home, and this is as much the case in Belgium as in the United States; therefore the foreign name is a recommendation. Dispatch No. 27, in addition to the letters written to this consulate, occasioned a visit from Mr. Charles Delacre, a well known pharmacist of Brussels, who deals extensively in patent medicines, both American and English. He had a plan to mention by which American medicines might be introduced, which I asked him to write out for me, and I would submit to the Department, which I herewith enclose." Consul Tanner goes on to recommend Mr. Delacre to the American dealer, and Mr. Delacre's letter is a purely practical one as to the best and most thorough means of advertising what he recognizes in so many words as the two classes of proprietary medicines. The first, such as may address the medical body, viz.: Lactopeptine, Maltine, Dr. Fellows' Hypophosphites, etc.; and the second, such as may address the public, as Hop Bitters, Mother Siegel's Syrup, Perry Davis' Pain Killer, Holman's Pad, etc.

The report of Consul Stahel, of Osaka and Hiogo, Japan, on the Tea Trade of Japan, is full of interesting matter concerning the widespread and injurious adulteration of tea.

Consul Welsh, of Florence, refers to olive oil, pure and adulterated. "The adulteration of olive oil in Italy has long been known to exist, and cotton oil has been so freely imported from the United States for that purpose that the Government has largely increased the duties thereon, the law of May 30, 1878, having fixed a duty of 6 livre per quintal, and the law of April 7, 1881, having established a duty of 20 livre per quintal." Prof. Commendatore Bechi, Director of the Technical Institute and of the Agrarian School, has the following test: 1 grain of crystallized nitrate of silver dissolved in 100 cubic centimeters of alcohol 98°; and it is applied as follows: In a glass bulb place 5 cubic centimeters of the olive oil to be tested; add to this 25 cubic centimeters of alcohol 98°, then add 5 cubic centimeters of the test. Place the whole in a water bath, temp. 151° F. After half an hour's immersion the oil, if injured, becomes of a dark, muddy color, and with practice and caution the actual proportion of the adulterating liquid can be determined. This test is based on the essential quality possessed by the glyceride of the cotton oil to reduce the nitrate of silver.

Consul Roosevelt, of Bordeaux, presents a report on the adulteration of wines in France, consisting in part of extracts from the French journals discussing the subject, which gives it a certain interest to medical men. The other reports in the volume serve as interesting reading on general topics.

MINUTES OF THE STATE MEDICAL SOCIETY OF ARKANSAS AT ITS EIGHTH ANNUAL SESSION. Little Rock. 1883. 8vo., 115 pp.

This is a well-printed volume, containing material which is confined for the most part to discussions on medical legislation and medical education, and to reviews of the progress of medicine. Such papers on cases and personal experience as were read during the session, are referred to by title only. The Board of Visitors to the Medical Department Arkansas Industrial University report favorably on the thoroughness of instruction imparted and the standard of examination. The number of matriculates for the session of 1882–83 was thirty-two, of which number four were candidates for graduation. Dr. Z. Orto, as Chairman. presented an interesting report on State Medicine; 208 names are borne on the list of members.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF KENTUCKY, 1883.

Those who have watched the progress of State medicine during the past year have doubtless noted the difficulties under which the State Board of Health

of Kentucky has labored. Of the six members of the Board (all physicians) two have habitually absented themselves from all meetings of the Board, and withheld their aid in all its undertakings. The cause of this seems to lie in simple lack of interest, rather than any disaffection on the part of the non-conforming members.

In the selection of its secretaries, the Board has been, to say the least, unfortunate. When first organized (in 1878) a secretary was elected under circumstances which necessitated his retirement in order to avoid the odium of public scandal and criticism. He was succeeded by another physician, who, after three years' tenure of the office, was requested to resign. In consequence of a lack of harmony between the Board and its secretary, and an apathy in the discharge of the executive duties of that office, the affairs of the Board have gone on badly. At the last session of the General Assembly of Kentucky, a bill to double the very small annual appropriation of the Board ($2,500) failed of passage. When, soon afterward, the medical and secular press began to direct public attention to the scanty work accomplished by the Board, this organization was seriously embarrassed. The secretary made no response. The annual report for 1882 was meager, and, in many parts, full of errors. At this time the really efficient and able members determined to actively take the affairs of the Board into their own hands, and make its work scientifically valuable and practically useful. A committee was appointed to enquire into the adulteration of foods and medicines, and emyloy expert services in its investigations. The subject of school buildings and their proper ventilation was referred to another member, with instructions to appoint a sanitary inspector to inspect and report upon the sanitary condition of the public school buildings and asylums of the State. It was decided to elect Dr. J. N. McCormack, of Bowling Green, an accomplished and thoroughly practical physician, secretary, which was formally done at the recent quarterly meeting of the Board. With these auspices of new activities in anticipation, the fifth annual report comes to our table.

The volume opens with a list of the County Boards appointed by, and in connection with, the State Board. The act of the legislature establishing a State Board of Health, together with the amendments to that act which have been adopted, are given in full. The Secretary's report contains a number of letters from physicians in various parts of the State, relative to the health of their respective communities. The report also includes editorial articles relating to prevailing diseases and sanitary precautions from several newspapers, and a communication from the Secretary, Dr. J. J. Speed, to the daily *Courier-Journal*. It is difficult to comprehend the purpose of inserting these articles, containing interviews with physicians, and other clap-trap usually found in such communications, in the official report. Dr. J. W. Holland, a member of the Board, contributes an article on "Mortuary Statistics," in which he points out the defects in the method of collecting these data, and the injustice done the Board in holding it responsible for evidence gathered by county assessors. Dr. Holland, as a special committee on the "Adulteration of Food and Medicines," being unversed in practical chemical analysis, secured the aid of Dr. J. B. Marvin, of Louisville, a skilled practical chemist and microscopist, to examine and report upon the comparative value of the several malt preparations offered the profession. Prof. Marvin is well known as a pains-taking and trustworthy investigator in every detail of chemical analysis, and hence the value of his report upon this important class of constructive medicines. The preparations of malt, both plain and in combination with other medicinal agents, have, in consequence of their digestive and constructive properties, deservedly won a high place among therapeutic agents. It is well known that the digestive agent in these preparations is diastase, the principle which converts starch into glucose, and hence the merits of any given malt extract depend upon the activity of these diastatic properties. Prof. Marvin obtained, from a well known wholesale house, bottles of each of the following brands: Trommer's, Maltine, Keasbey & Mattison's, John Hoff's (imported), John Hoff's (Tarrant's), Liebig's, and Shaker's Aromatic Elixir. After applying the test most carefully under identical conditions, he places the Trommer extract at the head of the list, having found it to possess most active diastatic properties. Keasby & Mattison's preparation, he says, behaved in a similar manner, and these two preparations alone were found to possess the power of digesting starch. Maltine failed to respond to the test, and at the end of several hours gave no evidence of the desired qualities. The other preparations, also—Hoff's, Liebig's, Horlick Dry Malt Extract, and Shaker's—utterly failed to digest starch. Prof. Marvin concludes by stating that "to prescribe malt extract at its present price, and obtain a sample which contains no diastase, is to pay very dearly for malt sugar and extractives from barley." The expert services of Prof. Marvin were also secured for a report upon "Illuminating Oils." The results of testing five samples of oil in common use for illuminating purposes are given, together with the restrictions which should be made upon the sale of these dangerous agents. This is one of the most valuable features of the report.

Prof. C. Lewis Diehl, of Louisville, the well-known chemist and pharmacist, in conjunction with Prof. Holland, made an analysis of six popular brands of sulphate of quinine, the results of which are accurately reported. Our limited space prevents a synopsis of this important investigation.

Dr. R. W. Dunlop, of Danville, a member of the Board, contributes a brief article on School Sanitation, in which he points out the dangers of propagating contagious diseases when a large number of children are gathered together from day to day. He also directs attention to the importance of observing the well-known principles of light and ventilation for the health and development of the inmates of school-rooms. He concludes with a plea for good light, pure air, short school hours, no crowding, and mild discipline. This is an excellent and thoroughly prac-

tical paper. For inspection of the public school buildings and asylums of the State, Dr. Dunlop secured the services of a sanitary inspector, Prof. L. Eddy, of Danville, whose scientific attainments and mature experience furnish special qualifications for the task assumed. An examination of Prof. Eddy's report shows a thorough comprehension of the principles involved in heating, draining, ventilating and furnishing water to large public buildings, and also gives evidence of a conscientious accuracy in all the work undertaken. This paper represents a great deal of labor, including personal inspection of the insane hospitals, the schools for the feeble-minded and deaf-mutes, and the public school buildings in all the principal towns of the State. The report concludes with an admirable paper npon the principles of ventilation, particularly as applied to school buildings.

Dr. J. N. McCormack, of Bowling Green, a member of the Board, relates how an epidemic of small-pox was controlled in Edmonson county, and contributes a paper entitled, "A Sanitary Survey of Bowling Green." This paper is quite sufficient to fix Dr. McCormack's reputation as a sanitarian. While of local interest for the most part, it illustrates in an admirable manner the principles of sanitation as applied to towns. The paper is a model of its kind. It is replete with information, and shows throughout an abundance of practical knowledge. It is illustrated with an instructive map, showing the geological formation, elevation above the river, and the points of prevalence of epidemic diseases. Dr. McCormack's paper gives the result of chemical and microscopical analysis of the water supply, with suggestions relative to the important matter of sewerage. We cannot but repeat this sentence: "In such matters as the sewerage and water supply of a town, the authorities are the most convenient agents of the individuals, but on most points sanitation, like religion, is a personal matter, and each individual, or each household, has a work to do which cannot be done by others."

Dr. Pinckney Thompson, of Henderson, the President of the Board, contributes to this volume a readable paper on "The Causes of Typhoid Fever." Dr. Thompson is a practitioner of ripe experience, and has written this paper after a thoughtful observation of the disease, and an investigation of recent writers upon the subject. He denies the specificity of enteric fever, and endeavors to prove that the decomposition of animal and vegetable matters generates a poison capable of producing typhoid fever. Dr. Thompson thinks that if the now accepted views of the pathogenesis of typhoid are correct—that each case results from the poison of a previous case of the disease—it would be a *scandalum magnatum* upon the profession if the disease were not quickly exterminated. It is quite evident that Dr. Thompson's enthusiasm upon the vital principle of cleanliness as a sanitary measure, has overcome his impartial consideration of evidence in this intricate pathological inquiry. With increasing experience in the investigation of the origin of epidemics of typhoid, outbreaks which cannot be traced to the introduction of the specific poison become more rare, and fewer observers are found to support the views of Murchison, as adopted in Dr. Thompson's paper. There is overwhelming evidence that the poison is always and invariably derived from some previous case, and the only facts which *appear* to indicate its independent origin, are occasional outbreaks of the fever in villages or isolated districts, which cannot be traced. On similar grounds the *de novo* origin of small-pox and all the well known specific contagions could be proved.

In addition to the papers above noticed, the volume contains articles from Dr. Arch. Dixon, of Henderson, on the "Duty of Physicians to the State Board of Health"; and by Dr. W. M. Fuqua, of Hopkinsville, on "Small-Pox." Both of these contributions are interesting.

This volume contains an article by Dr. J. G. Carpenter, of Stanford, with this very pretentious title: "A Report of the Diseases of Stanford and Vicinity, their Causation and Mortality, and of the Local Board of Health of Lincoln County." In a space of less than five pages this portentous subject is disposed of. It would be difficult to find in an equal space a more conspicuous exhibition of inaccuracy of pathological knowledge in general and as applied to vital statistics, together with a more total disregard for grammatical language. The extraordinary statement is made that "muco-purulent ophthalmia, epidemic and contagious," ranked third in degree of prevalence in a community situated in a fine temperate climate, and engaged for the most part in agricultural pursuits. The expressions, "malarial typho," and "infantal diarrhea," and the statement that "diphtheria was sporadic," will convey an idea of the reckless manner in which words are coined and applied by this writer. The writer does not give the source or method from which his data were obtained, but deals with the extent and character of prevailing diseases in a large county during an entire year in the most dogmatic and self-assured manner. The paper is utterly worthless, and one is at a loss to understand how it was admitted to a volume containing so many valuable articles. Indeed one must suppose, from a perusal of this paper, that the Board has as yet put no restriction upon the character and extent of voluntary communications.

We hope this Board will be strengthened by judicious appointments on the part of the Governor of Kentucky, during the approaching session of the General Assembly; and that having passed the ordeal of five years' experience, it will enter upon a career of renewed usefulness to the public, creditable alike to itself and the cause of State medicine in America.

DOMESTIC CORRESPONDENCE.

WASHINGTON LETTER.

The medical schools of Washington are now in full operation for the winter, with fair classes. Clinics are given at the Providence Hospital, Children's Hospital, and Central Dispensary.

Prof. J. Ford Thompson has returned from Europe, where he spent considerable time in following the

practice of the Germans, and has resumed charge of the Chair of Surgery in the National Medical College (Medical Department Columbian University), and gives regular clinics at the Children's Hospital.

Surgeon-General J. B. Hamilton, United States Marine Hospital Service, has been appointed to the Chair of Surgery in the Medical Department of the Georgetown University, and gives clinics at the Providence Hospital. Prof. Hamilton lectured on Surgery at the National Medical College during the winter of 1882–83, during the absence of Prof. J. Ford Thompson, and now takes the place of Dr. Beale, who has resigned.

Dr. Frank Baker, formerly Assistant Demonstrator and Prosector of Anatomy to the National Medical College, now fills the Chair of Professor of Anatomy in the Georgetown University Medical Department.

The Societies began their regular meetings with October. The Medical Society of the District of Columbia meets weekly.

On September 26th Dr. W. H. Taylor read the notes on *A Case of Opium Poisoning Treated Successfully by Atropia and Caffein Hypodermically and Artificial Respiration.*

The subject was a woman of 45 years of age, who took a half ounce of laudanum at 3 P. M. She was first seen at 5 P. M., when she was insensible; pupils contracted to a pin's point; conjunctivæ not responding to irritation; pulse rapid and small. Administration of zinc sulphate and application of cold water had no effect. At 5:40 P. M. respiration 6 per minute, pulse 118. Atropia sulphate $\frac{1}{160}$ grain hypodermically. At 5:50 atropia sulphate $\frac{1}{53}$ grain; respiration 2; pulse 136. At 5:54 atropia sulphate $\frac{1}{53}$ grain; respiration ceased for over a minute; pulse could not be counted, action of heart very rapid. Applications of cold water and artificial respiration. In a few seconds respiration recommenced. Caffein one grain hypodermically. At 6, respiration 8; pulse 120. At 6:10, caffein one grain; respiration 12; pulse 128. At 6:23, atropia sulphate $\frac{1}{53}$ grain; respiration 9; pulse 128; swallows and sensible to outward impressions; pupils begin to dilate. At 6:40, caffein ½ grain; respiration 7, pulse 126. At 7, natural sleep.

In the discussion which followed Dr. Reyburn said he had succeeded with nitrite of amyl in a child three months old, which had become thoroughly narcotized.

On Oct. 17, Dr. Joseph Taber Johnson presented the ovaries and fallopian tubes which he had removed from a young lady seven days before. The patient was 21 years of age, and had presented for several years the characteristic symptoms of chronic ovaritis. After nine years of painful menstruation, and four years of unsuccessful treatment, the operation was performed, and the patient is now doing very well, having a pulse of 88. and a temperature of 100 $\frac{4}{10}$. In a case operated on a year ago last August by him, both ovaries and one tube were removed, but the patient had menstruated with the greatest regularity ever since the third month after the operation. In accordance with the theory of Lawson Tait, he had removed as much of both tubes as he could, in the hope of establishing a permanent change of life.

Oct. 31, Dr. S. O. Richey read a paper on Ametropia.

Nov. 7, resolutions were passed and remarks made upon the recent death of Dr. W. G. H. Newman, viz:

WHEREAS, The Medical Society of the District of Columbia has heard with deep regret of the death of Dr. W. G. H. Newman, one of its oldest and most esteemed members:

Resolved, That by the death of Dr. Newman, the profession has lost one of its most earnest and efficient practitioners, and the community one of its most respected and valuable citizens.

Resolved, That the zeal and devotion with which he discharged his professional duties, without regard to the wealth or position of his patients, are deserving of the highest praise and commendation.

Resolved. That the members of this Society tender their heartfelt sympathy to his family in their sad bereavement, and that they will attend his funeral in a body.

Dr. D. R. Hagner spoke of the traits of character of Dr. Newman, as a true and loyal friend, and as a constant and laborious worker among the poor without the slightest hope or thought of pecuniary reward. Born in Maryland, in 1827, he was a student under Dr. Nathan R. Smith, of Baltimore, and a medical graduate of the University of Maryland in 1849. A practitioner of medicine in the District of Columbia for thirty-four years, he held several offices of trust—Physician to the Poor; Member of the City Council; of a former Board of Health; President of the Board of Visitors to the Washington Asylum; for twenty-one years consecutively Surgeon of the Police, and for fifteen years Chief Physician to St. Anne's Infant Asylum. Latterly, he has been one of the consulting staff of Providence Hospital. He died of malignant disease of the pylorus, but retained his hold upon his active practice and the affections of his patients to almost the last moment. Dr. Hagner feelingly described the father and husband taking him up in their arms to the bedside of their suffering loved ones.

Other remarks were made by Drs. Johnson Eliot, Louis Mackall and D. J. Kelly, which confirmed and enlarged upon Dr. Hagner's high estimate of Dr. Newman as a man and physician.

LETTER FROM WASHINGTON.

The annual report of Columbia Hospital for Women, and Lying-in Asylum has been submitted to the commissioners of the District of Columbia by the Surgeon in charge, Dr. P. J. Murphy. The report of the President, Mr. William Paret, refers to the evidences of good management and skillful treatment presented by the absolute freedom from deaths in the many cases of child-birth, and the minutely small proportion of deaths from other causes.

Dr. Murphy's report states that four deaths only are recorded as occurring in the medical and surgical wards, and in the lying-in wards no maternal death is recorded. There were one hundred and thirteen children delivered, which, with the one hun-

dred and fifty-six of last year, makes a total of two hundred and sixty-nine deliveries (instrumental, preternatural and natural) without a single maternal death. There has been no case of puerperal fever in two years, and no case of gathered breast in the last one hundred and thirteen deliveries. The infantile mortality reached only three as against four for the preceding years.

The report of Columbia Hospital dispensary for the fiscal year shows a total of five hundred and ninety-eight treated during the year, and forty-seven under treatment at present. Prescriptions compounded, one thousand five hundred and two.

The report of the Treasurer, J. T. Mitchell, shows that the amount of appropriation from the general government was $15,000, and the amount received from pay patients $9,215.22, the average daily expenditures being $54.51½, and the average cost per diem for each patient $1.78. He mentions the completion of the west wing of the hospital building, for which Congress, in August, 1882, appropriated $10,000.

The weekly meeting of the Medical Society of the District of Columbia was held on Nov. 14th. Dr. W. W. Johnston presented an interesting specimen of myoma of the uterus, and read the history of the case. Dr. H. R. Bigelow read an exhaustive paper on Points in Connection with the Pathology, Ætiology and Diagnosis of Myo-Fibromata of the Uterus. In the discussion which followed, Dr. Reyburn stated that from the statistics gathered by the chief physician of the Freedmen's Bureau, between one-fifth and one-fourth of the cadavers of colored females beyond the age of thirty years, were found to contain uterine tumors.

J. MARION SIMS, M. D.

DR. N. S. DAVIS, EDITOR JOURNAL AMERICAN MEDICAL ASSOCIATION:

At the annual meeting of the Æsculapian Society of the Wabash Valley, held at Paris, Ill., Nov. 21-22, the society having under consideration the death of Dr. J. Marion Sims, of New York, Dr. John Morgan McKown, of Arcola, Ill., offered the following tribute to the memory of the distinguished surgeon, which, by vote of the society, was ordered published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

C. B. JOHNSON,

CHAMPAIGN, Nov. 30, 1883. *Sec. Æsculap. Soc.*

Death, which respects neither attainments, nor rank, nor usefulness, nor genius even, has laid his pallid hand on one of the gifted ones of earth, and we mourn with dimmed eyes and troubled hearts a great man fallen. J. Marion Sims is dead! That active intellect, acute, grasping, alert, commanding, will never be felt again among the thinkers of earth, except in the priceless legacy of its great achievements. Wherever civilization has come; wherever genius is loved; wherever the beneficent offices of the healing art have blessed the homes and sweetened the lives of men; wherever the dignity and the grace and the sweetness of woman have had their charm for the heart and the life of the race—there will the death of J. Marion Sims bring the tribute of a sigh or a tear. Full of years, full of usefulness, full of honors, he has lain down to needed rest.

Whatever distinction other sons of New York may have gained in the stern struggle of life, in all the elements of a man, J. Marion Sims stands the peer of any who ever trod her soil. Versatile, magnetic, brilliant, with a voice whose every cadence was a charm, he moved among men a rare and gracious presence, and to woman was a perpetual wonder and benediction. Rescuing her, by his industry, his love, his ceaseless devotion to the high demands of his art, and by his genius, from the awful catastrophe of a blighted life and a miserable death, is it strange that she should go to his tomb with something of the sorrow and adoring love with which Mary went to the sepulcher of the Nazarene?

But why multiply words? No voice from this society can call back the radiant spirit of our dear, dead friend, or add to his essential glory. His life lives green in the memory of his professional brethren, and with them he needs no eulogy. Whatever carping criticism, whatever asperity, whatever unkindly feeling there may have been, in any quarter, while this strong and daring personality was doing its ceaseless work, "the grave buries every resentment." To us, now that the clods of earth cover his bosom, and we have his memory only, he stands the embodiment of skill and devotion and genius. And to the world he will always stand, in some sense,—in a large sense, indeed,—as the representative of what is highest and best and truest and sweetest in our calling.

"His life was gentle, and the elements so mixed in him, that nature might stand up and say to all the world, *this was a man!*"

THE PULSE AFTER HANGING.

MARYVILLE, TENN., Nov. 28, 1883.

PROF. N. S. DAVIS, M.D., EDITOR:

On the 23d inst., Andy Taylor was executed or hanged at Loudon, Loudon County, Tenn. Being one of the physicians appointed to be present at the execution, I took the following notes: Pulse after the rope was adjusted, 121; first minute after the drop, pulse 54; second minute, 52; third minute, 30; fourth minute, 20; fifth minute, 0; sixth minute, 70; seventh minute, 73; eighth minute, 0; ninth 34. After this no pulse was perceptible; neck not dislocated; died from strangulation. The heart beat the nineteenth minute one time, and two or three times only from the ninth to the nineteenth, when life was extinct. No priapism produced. Drop fell at 3:15 P. M.; the body was cut down in thirty minutes. I send you the above items, thinking that they would be of some interest to the profession from a physiological standpoint. I am, very respectfully,

JOHN P. BLANKENSHIP, M.D.

NECROLOGY.

SIMS, JAMES MARION, M.D., of New York, was born in Lancaster District, South Carolina, January 25, 1813; died suddenly of heart disease at his residence in New York, November 13, 1883. He was a descendant of the great Scottish chieftain Rob Roy McGregor. His birth place was in the vicinity of the dividing line between North and South Carolina, near where General Jackson first breathed life. Having received a good education at the common schools, by the aid of private tutors he also became well grounded in the classics and studied French, which he wrote and spoke with readiness. At a proper age he entered and graduated in letters from the South Carolina College in 1832. His medical studies were pursued in Charleston, S. C., and then in Philadelphia, Pa., where he received the degree of M.D. from Jefferson Medical College in 1835. The following year he began practice near Montgomery, Ala., and the following year moved to the city, where he acquired a large and lucrative business. In 1845 he communicated to the profession some new views on "Erismus nascentum," which he published in the *American Journal of Medical Sciences* 1846 and 1848. In 1845 his attention was especially called to the gravity and frequency of vesico-vaginal fistula, which, previous to that time, had been deemed incurable. He conceived the idea of relieving it by a surgical operation. To this end Dr. Sims established at Montgomery a private hospital in which he received patients suffering from this accident and after many efforts and modified procedure, instruments, and operations in 1849 fully established the fact to the profession that his operation was a success. The devotion and earnestness with which he pursued this branch of surgery led by nec-es sity to invent a number of new instruments and devices to accomplish the desired results, some of which bear his name. Among which are the specculum, the use of the silver wire sutures which would become saculated, instead of the silken thread, was of itself a great factor in the success. Subsequently he used this silver wire suture in all operations in which the suture was required. His health failed in 1850 and in 1851 while confined to his bed by a severe and protracted indisposition, which he and his friends feared would terminate in death he wrote his famous paper, "Sims' Operation for Vesico-Vaginal Fistula," which was published in January, 1852, in the *American Journal of Medical Sciences*. The good results which he obtained in his hospital for the special treatment of diseases and accidents peculiar to women, reports of which were published in the *Medical Journal*, speedily awakened among medical men much interest, and patients were sent to consult Dr. Sims from all parts of the country.

A change of climate on account of his health as well as to find a larger field for professional work, led him to settle in the city of New York, in 1853. Although his health was not fully restored, yet with the encouragement of some of the leading physicians, within a year he commenced the founding of a Womens' Hospital in that city, which, through his energy, efficiency, eminent surgical skill, and under the patronage of some forty of the first ladies of New York, soon became an established fact. To bring the subject directly before the profession of the city of New York he delivered a convincing address upon the needs of such a hospital to a large audience in the old Stuyvesant Institute. A committee of physicians were at once appointed to assist in accomplishing the object. An appropriation of $25,000 was obtained, which, with the funds raised by the ladies, a house was rented for temporary use on Madison avenue, and the hospital opened in May, 1855. Dr. Sims was elected attending surgeon, and Drs. Alcott, Stevens, Francis, Delafield and Green a consulting board. The institution was immediately filled with patients from all parts of the country. The success attending the treatment of patients, and the important operations performed in it speedily demonstrated its usefulness and the need for an enlarged establishment.

During the session of the New York Legislature in 1857 and 1858, Dr. Sims obtained a charter for the "Woman's Hospital for the State of New York," and obtained from the city 80,000 feet of ground for hospital purposes near Central Park, opposite Columbia College, and an appropriation of $10,000 to assist in its construction. Dr. Sims made a careful study of the merits of different kinds of hospitals and plans, and finally adopted the pavilion system as the most satisfactory and best suited to his purposes. The first pavilion containing 70 beds was completed and occupied in 1866. Largely through Dr. Sims and the merits of the hospital State aid at different times, to the amount of $60,000 was obtained for the institution. A second pavilion was opened in 1876, and the combined capacity of the pavilions was 260 beds. This hospital is at once a monument to Dr. J. Marion Sims, and to humanity and medical progress of the age. In 1861 he (Dr. Sims) visited Europe, chiefly to study hospital construction and their sanitary requirements. His coming was everywhere heralded, and he received from the profession in all the larger cities and hospitals such a welcome as has rarely or never been given to a medical man. He was solicited to operate in many of the leading hospitals, and by surgeons who themselves enjoyed a world-wide reputation. London, Paris, Dublin and Brussels were each in turn the the theater of his surgical triumph, and which renewed reputation in many and different hospitals. His successes were so noted and brilliant that he speedily received decorations from the Government of France, Italy, Spain, Portugal and Belgium as a public benefactor. From France he received the "Order of the Knight of the Legion of Honor," and from the Belgian "The Order of Leopold."

In 1862, after a brief stay at home, he returned to Europe to place his children at school, but with the intention of returning to his practice in New York, which had grown to be large, responsible and remunerative. But as soon as it was known that Doctor Sims was in Paris patients flocked to him in such numbers, from all over the world, as to fully occupy his time, which rendered it next to impossible for him to elude promise of treatment and relief. It

was not till 1868 that he again returned to New York and resumed his practice, his family remaining in London. In 1870 he was in Paris at the opening of the Franco-Prussian war and was the means of organizing what is known in history as the "Anglo-American Ambulance Corps," and was made its surgeon-in-chief. The organization did good service at and after the battle of Sedan. He was placed in charge of a hospital with over 400 beds and served faithfully and effectively for a month, when he resigned the place. He was one of the escort which attended Marshal McMahon from the field when wounded by a shell. The incident was gracefully remembered and acknowledged by the Marshal giving them a thousand francs to purchase delicacies for those confined in the hospital. The account or report of the services of the operations of the Anglo-American Ambulance Corps was made by Dr. Sims' first assistant, Wm. McCormack, now Sir Wm. McCormack, and published, in London, in 1870. I am unable at this time to give a full list of Dr. Sims' contributions to medical literature. Whenever he wrote he had something to say which the medical profession was ready and anxious to hear. So able and original an exponent of the art and principles of medicine was sure of an answer. Besides the two papers which have been noticed and which brought him at once so prominently before the profession he wrote on "Silver Sutures," in surgery, "Clinical Notes in Uterine Surgery," "Intra-Uterine Fibroid Tumors," "Microscope in Sterile Condition," "A Treatise on Craniotomy," and a "History of the Discovery of Anæsthesia," and his "Centennial Address" as President before the American Medical Association in 1876. In addition to these he was a frequent contributor to the current medical journals. Dr. Sims was an active or corresponding member of many medical societies at home and in Europe, besides being an honorary member of numerous medical and scientific societies. He was a member of the Alabama State Medical Society, the New York State Medical Society and the New York Academy of Medicine, the New York Neurological and the New York Pathological and Surgical Societies. Honorary member of the Connecticut, Virginia, South Carolina and California Medical Societies. Dr. Sims became a member of the American Medical Association in 1858 as a delegate from the "Woman's Hospital of New York." He attended the meetings in 1860, 1872, 1874, 1875, 1876, 1877, and 1880, and was President in 1876. Dr. Sims has made some valuable communications to this Association, which may be found in its Transactions.

He was also a member and President of the American Gynæcological Society, and has contributed ably to its Transactions. His skill and eminence in the obstetrical art led to his engagement to attend the accouchements of the Empress Eugene, of France, and also the Empress of Austria. His practice in Europe was largely among the nobility, from whom he received large fees and valuable presents.

The doctor visited Washington City a few weeks ago and bought a most elegant site for a residence on Sixteenth street, and looked forward to a home in this city, where he should retire from active practice. He was then in apparently good health, and certainly looked remarkably well, but spoke of the necessity of his being careful as to diet and exposure. Wishing to avoid the rigor of the winters, he proposed to visit Italy, and had anticipated a delightful sojourn of two or three months in Rome.

Some three years since, Dr. Sims suffered from a severe attack of pneumonia, since which time he has found that he suffered in cold weather. Hence, for the past two years he has spent the winter months in the south of France and in Rome, and the rest of the year in other parts of Europe, France, and the United States.

Dr. Sims was united in marriage Dec. 21, 1836, to Eliza Theresa, daughter of Dr. Bartlett Jones, of Lancaster, S. C., who, with seven children, survives him. His son, Harry Marion Sims, is in active practice, and most abundantly and worthily inherits the ability and skill of his father, whose memory the whole medical profession loves to honor, for by his genius, and devotion to medical science and art he advanced it in its resources to relieve human suffering as much, if not more, than any man who has lived within this century. Doctor Sims's funeral takes place from Madison Square Presbyterian church on Friday—a church in which he was one of the oldest pew-holders.

Peace to his ashes.

J. M. T.

THE CHICAGO THROAT AND CHEST HOSPITAL—ITS ORGANIZATION.—A meeting was held yesterday at the residence of the Rev. Dr. Wm. M. Lawrence, to organize a Chicago Throat and Chest Hospital, and the following named gentlemen were chosen directors: The Hon. Wm. Aldrich, the Rev. Dr. Wm. M. Lawrence, Dr. E. Fletcher Ingals, Dr. G. F. Hawley, the Hon. C. C. Kohlsaat, W. Howard, and Hermon Kohlsaat. The object of the hospital, like its namesake of London, England, and others on the Continent, is to offer opportunities of treatment to those who are unable to employ a physician, but are still unwilling to be considered objects of charity. The hospital will consist of an out-door department where patients will be treated daily, and of an in-door department where patients will be cared for by experienced nurses under the direction of the attending physician. No physician is to accept a fee from any of the patients, or from the institution. We have already made ample provision for in-patients who are able to pay for board only. We hope to have the out-patient department in working order in about two weeks.

NOVEMBER 25, 1883.

A SANITARY CONVENTION will be held under the auspices of the State Board of Health, in the city of Ionia, Michigan, Thursday and Friday. December 13 and 14, 1883. Officers of the Convention: President, Rev. J. Pierson, D.D.; Secretary, Alex. W. Dodge, Ionia; Assistant-Secretary, Erwin F. Smith, Lansing. Reduced fares on railroads may be obtained by applying for certificates to the Secretary of the Convention.